

The impact of economic crises on the development of innovation and entrepreneurship

[Elizabete Dombrovskā]



Master thesis in innovation and entrepreneurship
Centre for Entrepreneurship

UNIVERSITETET I OSLO

19.05.2014.

Abstract

Economists are describing crises affect in numbers how crises has affected counties all over the world, but how do companies are finding solutions to overcome crises when financial resources are less available and does dynamic capabilities have positive relationship with creation of innovative products in times of crises is not explored enough. (Archibugi D, Filippetti A., 2011). By performing qualitative interviews, research will draw main lines how enterprises are overcoming crises and in which ways firms reorganize inner resources and processes, which are supported and performed inside companies to keep advantage and rivalry. (F. Damanpour, S. Gopalakrishnan 1998). Research will give some suggestions and ideas that might help to other companies to think over their inner processes in times of crises and might give inspiration to find better solutions firms can reorganize resources and capabilities inside companies to overcome crises situation and through this process might be created also some new innovative variations of existing products.

Acknowledgements: Especially I am grateful to my thesis supervisor - Professor Tommy Claussen for his comments and support to write this thesis.

Table of content

1. Introduction	5
1.1. Research purpose and actuality.....	6
2. Theory and thesis proposals.....	9
2.1. Theoretical background of dynamic capabilities	9
2.2. Firm performance in a financial crisis and its dynamic capabilities.....	14
2.3. Innovation indicator development theories.....	19
2.4. Innovation concept and definitions.....	20
2.5. Structural theories and innovation kinds – administrative and technical innovations.....	22
2.6. Innovation adoption in organizations.....	23
2.7. Environment changes and its role to innovation.....	23
2.8. Speed and rate of adaption of innovations.....	24
2.9. Innovation measurement difficulties and issues.....	24
2.10. Market orientation and innovation (Schumpeter, 1934) – opening new markets in time of crises.....	25
2.11. Innovation adoption features of organization’s in four different environmental conditions (EC)	32
Theory for organizational structure and innovation adoption, a role of environmental change-.....	32
Four different environmental conditions (EC).....	36
3. Methodology	39
3.1. Description of five interviewed companies	44
3.2. Short history of economic development in Latvia.....	46
4. Results	48

4.1. Findings about economic crises impact on entrepreneurship and innovation.....	49
5. Discussion	51
5.1. Findings after analyzing answers from interviews.....	51
6. Conclusions.....	64
6.1. Further research.....	67
References	69
Appendix.....	79
Constructed questions before conducting interviews	79
Transcribed interviews.....	81

1. Introduction

As it has been explained by many economists, the last economic crisis, which started in the world by the end of 2007, was the worst since the 1930s. This shows that this crisis had a major impact on the economy, which subsequently affected the companies all over the world. (OECD, 2014).

The most recent economic crises was disruptive and unpredictable event, which by the Schumpeter theory might promote new innovations and creation of new products that comes and replace old ones due to sharp environmental shift. Schumpeter is mentioning innovation as one of the sources of competitive advantage, (Schumpeter, 1950) and he was first one who suggested that firms are losing value and superior advantage of their products in longer time due to economic dynamic processes, which are tended to perfect competition. (Schumpeter, 1950; in literature V. Naidoo, 2010, page 1313). Schumpeter is first, that creates originally first definition of innovation in 1934, regarding service sector innovations, he states that: *"Economic development is driven by the discontinuous emergence of new combinations (innovations) that are economically more viable than the old way of doing things"* (Schumpeter, 1934). Does it really happen in such disruptive event like last economic crises, when many companies suffered from crises negative and disruptive nature? Most researches are done with large companies which usually have different way of operation and have more access to finance resources and business connections. Larger companies are usually less elastic as smaller companies. (Mustafa Hoshyar, 2011).

I suppose there are some processes besides investing in science and research activities how companies are finding solutions for developing innovative products. These reorganizing, renewing and extended activities characterize dynamic processes and capabilities in companies.

Now at this moment in the first trimester of 2014, when I am writing thesis, the lowest point of economic down turn phase is over and as statistical data shows, it starts very slow recovery process. (EU,SBA fact sheet, 2013) How does business are adapting to economic environment shift and how does it affected ability to innovate is main research topic. As people ability to buy products are lower and not as before crises. (Kristilla Skrūzkalne, Swedbank economist, 2014) There are processes that companies should evaluate how to minimize expenses if the sold amount reduces to keep incomes that could cover worker salaries and work with profit but not with losses. Does an economic crisis will affect the strategic choices to find new markets or find new solutions how to produce and sell

products? Large countries are more oriented to grow globally, does small country like Latvia will be able to make some shift or probably there might be some specific products that are oriented to satisfy some customer segments and such small companies might be more able to adjust and find new markets? My research will contribute to gain understanding how organizational and dynamic capabilities inside companies are changed to fit with economic environment. In common world picture it can give an understanding how small country Latvia is affected and how companies find solutions to overcome crises with perspective of dynamic capabilities in companies. Research will give some suggestions and ideas that might help to other companies to think over their inner processes in times of crises and might give inspiration to find better solutions with some ideas how organization can reorganize resources and capabilities inside companies to overcome crises situation and through this process might be created also some new innovative variations of existing products.

dynamic capabilities have positive relationship with creation of innovative products in times of crises By performing qualitative interviews, research will draw main lines how enterprises are overcoming crises and in which ways firms reorganize inner resources and processes, which are supported and performed inside companies to keep advantage and rivalry.

1.1. Research purpose and actuality

My research question is: "How does dynamic capabilities foster creation of innovative products in times of economic crises?" Main meaning of dynamic capabilities that are defined by researchers is following: "*Dynamic capabilities are all capabilities that initiate change and renewing of existing tangible and intangible resources in way that new opportunities are realized in practice by creating new products that better fit with environment.*" (Makkonen,2014; see Eisenhardt & Martin, 2000; Helfat et al., 2007; Winter, 2003; Zahra et al., 2006; Zollo & Winter, 2002) Research will contribute by giving some answers and expanding understanding what needs to be changed to improve firms' performance and overcome crises negative affect by using dynamic capabilities that can promote higher innovation level and help to adapt to environmental change to be successful.

There is the gap and space of research - how companies are activating dynamic capabilities, how they reorganize their resources to gain better performance and competitive

advantage in time of economic crises situation. It applies in media information that crises has negatively affected lot of industries, including innovation and entrepreneurship. The aim and purpose of this research is to find out how exactly does companies felt crises affect and how do they adapt to crises situation to overcome negative effect to recover and again have positive financial balance like it was before crises. What dynamic capabilities are important to activate and how better to adjust to new crises environment is not researched enough. My research will contribute to understanding of firms' adaption and recovery and give inside how this process affect creation of innovative products. (Caroline Paunov, 2012)

Companies lose previously established market place and lack of previous finances are making to reorganize inner resources, then the purpose of research is to find out in which ways firms are organizing their inner resources and capabilities during economic crises to keep marketplace.

Focus is to find out, what firms had to change, and how do they create innovative products or improved product versions that can be seen as incremental innovations, that are based on previous knowledge and experience. My research is performed by purpose to gain knowledge and deeper understanding how financial crises has hindered innovation in Latvian firms and what can be done to overcome it and improve innovation level in firms performance.

There is a lot of theory but too less information how firms practically implement some solutions in their daily routines. There might be some particular aspects or changed strategies, that can foster dynamic capabilities, that helps to creation of innovation products. Would be meaning full to find out practical solutions what firms has change and what is particularly important in crises situation to be successful, that could use other companies in economic crises situation. I personally feel interested how a crisis has affected innovation and firms' performance in last years. Research question will contribute how crises affected different firms in times of economic crises. I suppose there are some processes besides investing in science how companies are finding solutions for developing innovative products.

Now at this moment in the first trimester of 2014, when I am writing thesis, the lowest point of economic down turn phase is over and as statistical data shows, that it starts very slow recovery process. (EU,SBA fact sheet, 2013) As people ability to buy products are lower and not as before crises.(Kristilla Skrūzkalne, Swedbank economist, 2014) there are processes that companies should evaluate how to minimize expenses if the sold amount reduces to keep incomes that could cover worker salaries and work with profit but not with losses.

Research will give some suggestions and ideas that might help to other companies to think over their inner processes in times of crises and might give inspiration to find better solutions with some ideas how organization can reorganize resources and capabilities inside companies to overcome crises situation and through this process might be created also some new innovative variations of existing products.

Economists are describing crises affect in numbers how crises has affected counties all over the world, but how do companies are finding solutions to overcome crises when financial resources are less available and does dynamic capabilities have positive relationship with creation of innovative products in times of crises is not explored enough. (Archibugi D, Filippetti A., 2011). By performing qualitative interviews, research will draw main lines how enterprises are overcoming crises and in which ways firms reorganize inner resources and processes, which are supported and performed inside companies to keep advantage and rivalry. (F. Damanpour, S. Gopalakrishnan 1998)

2. Theory and thesis proposals

2.1. Theoretical background of dynamic capabilities

Theoretical background of dynamics capabilities is based and grounded on evolutionary economists' main findings and conclusion, and on the Schumpeterian innovation theory perspectives. (H. Makkonen and other authors, 2014, page 2708) Many researchers are agreed that: *"Dynamic capabilities are very much connected with creation of innovation, because through renewing, extending and modifying existing resources are created new innovative products or innovations, that more fit with demand in that particular time and in such way they also promote fitness with environment "*.(Makkonen,2014; see Eisenhardt & Martin, 2000; Helfat et al., 2007;Winter, 2003; Zahra and others, 2006; Zollo and Winter, 2002).

From theory background theories there is a link between dynamic capabilities, organizational change and innovativeness. (H. Makkonen and other authors, 2014, page 2708) Based on this theory link between dynamic capabilities and innovation, will be performed my research in times of economic crises environment.

Researchers are explaining meaning of dynamic capabilities following: *"Dynamic capabilities pompously initiate change and renewing of existing tangible and intangible resources in way that new opportunities are realized in practice by creating new products that better fit with environment."* (Makkonen,2014; see Eisenhardt & Martin, 2000; Helfat et al., 2007;Winter, 2003; Zahra et al., 2006; Zollo &Winter, 2002)

This theory that are stating researchers approves that innovation is result of exploiting opportunities by activating dynamic capabilities and innovations makes companies easier to adjust to environment and to survive in crises situation as long innovations are reasonable and well –considered.

Schumpeterian view points out that: "capabilities and routines contain firm's fundamental structure". Each company has its routines and daily performed operations that provide delivery of final product, but the fit between these routines and environment is describing to which extent firms have positive fit with environment. This combination between routines and environment helps to gain competitive element in that particular time and environment, where firms is operating. To gain this fit with environment, that helps to reach fundamental element

of competition is especially important in times of creative destruction. (H. Makkonen, 2014, page 2708). Economic crises can be seen as destruction process, which is caused not by created new innovation that ruins markets for previously invented technologies, but disruptive process in economic crises situation is caused by the limitation of finances. In crises situation firms are losing markets for previously created products and technologies and there is need for other replacement products or product versions that would satisfy new demand. Crises environment affected customers' ability to buy, and that changes values and characteristics that are required for certain maximally affordable price of products. It is understandable that in times of crises majority of people will not buy highest quality and most expensive technologies, for example, like improved iPad versions, if the prices of these products will 10 times exceed average monthly incomes of customers. This is very drastic example, but explains the crises environment situation. It makes producers to change products and produce them cheaper by using existing resources more effectively. It is vitally important to have competitive advantage over others also in times of crises, to retain customers that ensure ability to firms survive.

Schumpeter is clarifying that: "innovation is built from entrepreneurs' prior knowledge and resources. (Schumpeter, 1934). Knowledge and resources is building also dynamic capabilities, which are united aspect that unites dynamic capabilities with innovation. Schumpeter and other researchers are declaring that "the evolutionary fit between the firm and the environment is the measure of performance." (Nelson & Winter, 1982; Schumpeter, 1934). Performance should be even higher in crises environment, because it demands more organizational and all kind of resources to be used in right time and amount to gain the expected outcome in contrast with more elastic pre crises environment, when expected performance was much easier to reach with less efforts. Crises environment demands more effective and appropriate use of all resources.

Recent literature questions about firms ability and capacity to create innovations in conjunction with routine operations (Fagerberg, 2003). This is one of my research questions as well, that need to find answers in thesis research: "to which extent firms are able to create new innovations, meanwhile performing daily routines in crises environment?" It is more likely to assume, that that besides daily operations, are produced some new products, new innovative versions or new service approaches based on prior knowledge and practices. In literature there is suggestion to combine resources in a new ways and in such way renewing also organizational activities (see Eisenhardt & Martin, 2000).

Literature is building understanding of innovation creation that is built on evolutionary theory of the firm's resources. Important role plays capabilities that are transforming static resources and competences into new innovative and novel products or processes. (H.Makkonen, 2014, page 2708). Literature tries to describe that this transformation process when statistic skills are been used to create novel products, also creates the basic set of skills and capabilities that are building innovation and competitive advantage. (Hodgson, 1998; Nelson & Winter, 1982; Teece et al., 1997)

Finally Hill and Rothaermel are proposing theory that: *"capability-enabled innovativeness and innovation facilitate adaptation to the environment and success on the markets". (see e.g., Hill & Rothaermel, 2003). As their theory could be respected, it has not yet been tested in all kind of environments. Does this proposal also is true in time of crises in countries that has suffered a lot from economic crises, is worth to find out in this thesis research cases, because first impression is that crises affected negatively also capability innovativeness, but does it is true in all cases, would be worth to approve also in crises environment. Could it be also true that some innovations might not help to adapt to environment and ensure success in times of crises?*

Organization activities leading to value creation are whether exploitative or explorative (Duncan, 1976; March, 1991; Raisch & Birkinshaw, 2008)

To understand what the difference between them, it is explained in literature, that:

- *"Exploration refers to finding new ways of transforming existing ideas";*
- *"Exploitation refers to refining existing capabilities and resources, in order to create better value" (March, 1991).*

Usually most of successful companies are able to manage their current business demands or explore resources and capabilities inside company and meanwhile adapt to the changes in the outer environment by exploring resources and capabilities. Both processes are happening meanwhile. My research will contribute to understanding whether is crises situation these both processes can happen in the same way as it has happened before economic crises and what has changed inside company regarding adaption and exploring of resources in crises economic environment, because these exploring and exploiting processes are leading to understanding how firms are finding way to gain better value and more efficient way of operating to overcome crises situation.

Exploitation might come first in time of crises because in such way firms efficiency might grow and be more adjusted to new environment situation, because firms need first to

figure out which way resources should be reorganized and used in a adjusted way that form new values by creating some innovative changes of produced products or services.

Exploration process might play some certain role in time of crises, because some departments need to perform it in order to find out the needed directions how to adjust new ways of existing ideas and creating innovative products or product versions, for example, direction of transformation might be initiated by market reaching tasks, by customers' needs or by some other institutional or other factor influenced parameters.

It is also crucial to understand the theoretical difference between dynamic capabilities and organizational capabilities. Best explanation between operational capabilities and dynamic capabilities is giving Winter and Zahra: "Operational capabilities include the means and practices of efficiently configuring existing resources into products and services, whereas dynamic capabilities reflect the explorative side of the organization" (Winter, 2000; Zahra et al., 2006). Main concepts are built on the division between exploitative and explorative organizational activities. Then dynamic capabilities are more connected with explorative activities, all activities that are performed to search and research new ways how ideas and knowledge can be used in a new ways that could give some additional competitive advantage and additional value over others. Exploration process is very much connected with outer environment, because it *includes finding and realization of new opportunities in order to create value by crossing boundaries in connection with other actors in surrounding business connections* (Duncan, 1976; Raisch and Birkinshaw, 2008).

Adaption to environment can be seen as exploration process and successful management of current business demand can be seen also as exploitation operations, (H. Makkonen, , 2014, page 2708)

The innovation fitness to environment that is created by valuable dynamic changes in organizational level, it cannot be taken as absolute state, because after some longer period of time it might not be actual and not fit anymore with environment. (Leonard-Barton, 1992) It needs all the time to follow the speed of environmental changes and adjust again by activating dynamic capabilities mechanism, in such way firms can develop in sustainable manner. (Eisenhardt & Martin, 2000; Helfat et al., 2007; Newey & Zahra, 2009). There has been discussed that firms can follow negative inertia moment, if they don't govern the rate of change in operational capabilities (Collis, 1994; Winter, 2003; Zahra et al., 2006). The firm changes through dynamic capabilities. Dynamic capabilities refer to organizational change, that fosters and promotes innovation and as a result gives better evolutionary fitness. (Makkonen, page 2708, 2014) .

Literature describes many dimensions of dynamic capabilities; the essential dynamic capabilities are *sensing and seizing, learning and knowledge creation, integration, reconfiguration and leveraging*. (H.Makkonen,2014; Ambrosini et al., 2009; Barreto, 2010; Bowman & Ambrosini, 2003; Teece, 2007).

Scientists are dividing these capabilities in two groups: regenerative and renewing capabilities. (Ambrosini,2009, Winter's ,2003).

Regenerative capabilities help to renew old practices and modify firm's resources in ways that it creates new organizational changes. Renewing capabilities are more related to refreshing nature of source, for example, creation of new product lines. (Ambrosini, 2009). In order to renew existing resources are needed regenerative resources, which let modification and development and these capabilities are: reconfiguration, leveraging, and learning. (H. Makkonen, page 2709, 2014).

Sensing and seizing is important capability, because organizational capabilities together with external requirements require ability to sense and seek opportunities (Danneels, 2002; Teece, 2007).

All this theory leads to innovations, because ability to see and sense opportunities in environment together with the capability to generate new knowledge lets the firm to create new product variations, which actually is incremental innovations, in accordance with customers taste and demand (Helfat & Peteraf, 2003; Verona & Ravasi, 2003). Not many firms has this ability to find out changes of customers demand, but the ones which has knowledge and ability to have recommendations or feedback from customers are relatively successfully managing to adjust to changes and create new products. In economic crises important feature is price that satisfies customers, probably not so high quality for high prices like it was before, but reasonable products for adequate prices will satisfy customers in economic crises situation.

Knowledge creation includes following knowledge creation processes: transformation, realignment and integration of knowledge inside the company (Lichtenthaler U. and Lichtenthaler E., 2009). Of course it might be impossible to integrate all the relevant knowledge in the firm, but the vitally important one would be needed. Besides knowledge integration inside company, it is important to absorb knowledge from outside (Chesbrough, 2003; Lichtenthaler U.and Lichtenthaler E., 2009). This would be particularly important when business or firm is international, because in each country there are different norms, customer taste and demand and it requires ability to absorb knowledge and adjust to this demand. In

would be good to take examples from other companies in other countries how they act and overcome crises and what knowledge they use to adjust to changes in environment.

Dynamic capabilities makes easier adaptation to environmental change in highly dynamic environments (Teece and others, 1997), but their value is especially valuable in environmental turbulences like economic crises. (Eisenhardt & Martin, 2000; Zahra and others, 2006). Economic crises environment is unpredictable with sudden changes and it demands larger adjustments and faster responses from companies to take right decisions to survive and still operate in such changeable limited environment, because it makes to reconsider whole approach and business strategy. Turbulent and unpredictable environment increases the value of dynamic capabilities. The value of dynamic capabilities is highest when operating capabilities become not elastic through exogenous shock, like it happened in last economic world crises 2007/2008 (Newey & Zahra, 2009). Main question for successful business "How do we make money?" might have totally other answer in economic crises situation. To realize new way of creation changes, there are needed adjustments and renewing and regenerative capabilities are necessary to put in practice to adjust to change. (Ambrosini 2009) What might work as very successful business in stable economy might not have place in economic crises environment.

Firms are becoming in a way rigid and robust in their performance because of the lack of finances and sudden fall and change in demand, but it is essentially important to sense and have all abilities and knowledge to change products that would meet market changes even in hard economic crises environment. Literature and newspapers had lot of articles about need to remember what was important ten years ago in market and how companies developed when it was also change of currency and country started to build up its economy again. Some companies are even changing their whole offer or assortment as such to satisfy change in customers demand.

2.2. Firm performance in a financial crisis and its dynamic capabilities

Many companies bankrupted by beginning of economic crises negative effect in 2008, because most of these companies probably were not fit enough to survive or adjust to crises changes and so sudden bad financial situation and market change with less clients and

purchasing power made business to drop. The shock was so sudden that companies simply could not adapt to changes and reorganize their operations and capabilities or did not have time to think about even other values and strategies that could give more chance to overcome crises effect and continue business, while other companies which are alive have made some changes and are ready to work with minimal or half of incomes and reorganizes and take some strategic decisions how to survive in crises situation. It would be interesting to find out how large part of these changes played innovation and innovative activities and improvements, because as it was told before even small improvements are considered as innovations. It is interesting to research in the economic situation, when so sudden disruptive change as economic crises has come, how much and in which way companies implemented these changes to overcome crises and how does it affected overall firms performance.

Economy can be described with a strong dependency on global economic development. Economic fluctuation and economic downturn makes deep negative industrial changes and market changes.

Many industries experienced state of economic crises and main question is how to overcome faster crises situation negative effect and what is needed to be changed? This ability to reorganize all way of performance until goods are sold in market and find new approaches how to get incomes with less financial resources by spending less on some activities and activate some human resources capabilities or develop some other values of existing product can be referred to dynamic capabilities and innovative activities. Most successful companies utilize their core competences in several compatible areas and even changed their main business directions that more fit with crises situation expenses and customers demand.

It is understandable that economic crises is bringing large changes in environment that surrounds each individual company, meaning the demand of goods are decreasing due to cut of salaries and common financial situation influences business environment with less consuming and demanding goods and services, that is why economic crises might be seen also as an environmental change. In a way it can be described as environment and market becomes more inelastic. (Benett and Cooper,1979; Hurley and Hult, 1998) Innovation ability is connected with each company's ability to organize inner resources, capabilities in these different environmental conditions, and that is the main debate theme - the link between the organization and its operational environment - among organizational theorists.

There is concept that it exists closed system approach, that exclude interaction with the environment, and on the other hand opposite - open system approach theories, that consider that organizations and firms exist to convert external inputs by adding value to products that are sold or spread further to potential suppliers and clients into outer market or environment (Thompson, 1967). There is continuously evolving cycle between external output and internal input, and this continuous process has significant impact on characteristics of organizational performance. (Hannu Makkonen, Mikko Pohjola, 2014)

Organization performance is determined by the fit between organization and environment, this is contingency theorists (Lawrence & Lorsch, 1967) point of view. In a way it is understandable that there are companies who are developed and by its inner structure and performance are more able to survive in crises environment and other companies, that probably don't have such capabilities and financial and human resources to overcome crises situation. It means that some companies are more able to have better performance, because they more fit with environment, their organization is more adjusted and adapted to crises environment. It does not necessary mean that small companies are less capable to fit with environmental change due to less finances or other resources in contrast with large companies, it is more about ability to change and might be situations when small companies are able faster to adjust and reorganize structural and operational processes in order to fit with environment than large companies, which might be less able to adapt and fast change all previously established routines.

In terms of fit, there are again to extremes: deterministic and the voluntaristic view. Voluntaristic view explains that companies actively takes strategic actions to influence its fit with environment, instead of passively waiting of environment changes (Child,1972, Cyert and March,1963). Deterministic view states that organization's survival depends on its more fixed and previously developed characteristics. It is sure by the point of deterministic point that it is not possible to adapt to environment changes, it just separates whether company fits better to environment or not. (Lin and Carly, 1997)

Roughly and mechanically it is possible jut to separate all firms with a worse or better fit to environment (see Lin & Carley, 1997; Subramanian & Nilakanta, 1996). It is seen as one sided mechanism, but actually it is possible to suppose that also environment is bringing changes from outside. In a way all of previously mentioned theories have a part of truth is some percent in each company's performance, meaning that some of companies are more sophisticated and analyze situation regularly to take right decision to adapt to changes, that way it makes them more elastic and capable to survive.

By open system view it is assumption that firms adapts to environment, at least to some extent, with its limits of firms resources and capabilities. In literature regarding dynamic capabilities it is mainly emphasized need for firms to change their resource and capabilities and to adapt to environmental change, because "*inherited routines will lead to less adaption and lead to observing environmental changes instead of adapting to environment.*" (Helfat and others., 2007). Unfortunately negative crises affect makes many companies to have this routinized observing point of view on economic crises, instead of changing inner resources and capabilities to adjust and activate firms' dynamic capabilities. It takes time to change previous routines and to start to adaptation and improvement process especially in crises times. This attitude also is because of negative financial affect when economical processes slow down and markets become less active and elastic, this negative change makes majority of firms to take waiting attitude instead to faster adapting and activating inner dynamic capabilities.

Adaption can be achieved by implementing changes and all kind of innovations in service and production industries, although it could be made little changes in each field of sector, still it would bring improvements in performance and lead to slow recovery after crises. Incremental innovations and administrative innovations inside companies are much better that routinized approach and passive waiting for better financial situation in world and country.

Economic crises in 2008 led to a drastic economic downturn. This downturn brings environmental instability that affected each company to adjust dynamic capabilities to environmental changes. Firms differ how they experiences crises, some suffered dramatically and some avoided negative effects. Interesting to know what strategies or capabilities they applied to overcome crises negative effect, and in case companies has changed some approach or all strategies, it is innovative approach and improvement, some little adjustments in a way firms funiculate in crises still can be considered as organizational or administrative innovation. These dynamic capabilities are influencing innovation level or creating some new minor changes, that might be summarized by but qualitative effect on performance and will be mentioned in my research further on in analyze and conclusion part. From this point it is contribution to previously done research in innovation and dynamic capabilities theories.

Literature is mentioning that firms are benefiting from dynamic capabilities and operational capabilities, and that: "*environment effects and moderates the need and use of these dynamic capabilities*" (Ambrosini, Bowman, & Collier, 2009; Eisenhardt & Martin, 2000; Zahra, Sapienza, & Davidsson, 2006). Environment plays important role on the use of

dynamic capabilities, but in which extent and how it affects dynamic capabilities in so sudden negative downturn hit like last economic crises, that makes negative economic environment. This relationship is not researched enough my research will contribute to get the understanding of crises environment impact on dynamic capabilities and innovativeness.

In the most cases in literature researchers are focusing on dynamic versus stable environments. Pre crises situation was dynamic and active environment, when was economic growth phase, as we know economic processes are cyclic and crises is point when it starts opposite economical cool down period. Crises made this dynamic pre crises environment to change to more passive environment. Ambrosini and Teece states that: *"Dynamic environment relates to the rate of technological change or environmental inconsistency and changeability."* (Ambrosini, 2009; Teece, 1997; Hannu Makkonen and Mikko Pohjola, 2014). Hannu Makkonen, Mika Pohjola in their research this year in 2014 have come to conclusion about relation between dynamic an passive environment and ability to innovate, that more positive relationships are between innovation and dynamic environment, than in passive and stable environment. They are stating following: *"In dynamic environments technological changes and innovative solutions are appearing more often and faster than in stabile environments."* (Hannu Makkonen, Mika Pohjola and others, 2014). Pre crises environment can be described as dynamic environment, and crises environment is opposite to dynamic environment. It can be described as more passive and inflexible, therefore based on this theoretical conclusion which is stating Hannu Makkonen with other researchers in 2014. in the article "Dynamic capabilities and firm performance in a financial crisis" in journal of Business Research, first assumption can be declared as:

"Financial crises as more passive environment, in contrast with dynamic pre crises environment, affected negatively firms' ability to innovate".

Inconsistent environment are caused by instable economic processes in world or some rayon's, which in last economic crises covered nearly all world economies and countries. A disruptive event like economic crises is particularly special case when changes and reaction to financial crises can vary differently in short period of time in each country differently. Instabilities come in different forms and in different stages, economic crises affected in different way and nature each country separately, some countries suffered less and some worse. Economic crises can be described as negative and stable environment for firms and entrepreneurs, when crises affected negatively all fields and industries. People spend more than they actually earned in time before impact of economic crises and living standard glowed higher than actually state incomes were per total. Similarly happened in other countries, but

depending on the nature of environmental instabilities, it brings different level of significance of dynamic capabilities. Once financial resource are less,- significance of dynamic capabilities is growing. Ability to adjust resources to environment change plays very important role, that is why dynamic capabilities are called higher firms capabilities that should be activated in times of such environmental change.

2.3. Innovation indicator development theories

As the purpose of my thesis is to find out in what way innovation is less than before crises, I need some measurable parameters that could be used in interviews and give some answers of innovation level in times of crises.

To find indicators for innovation that could be used for measurements and could describe novelty, conceptual foundation of innovation and complex background in the Research and development scientifically data and actions has been ignored. The fact that innovation is based on an act of research and discovery has been forgotten. (Laestadius, 2003) Nathan Rosenberg in 1992 and 1997 in OECD s Innovation Manual has made some changes in understanding what innovation is and how to look on it, he challenges the notion of research based discovery as a preliminary phase of innovation and that it has to be separated from diffusion processes before commercialization improvements. (K. Smith, 2005). Rosenberg explained that diffusion process involves long and cumulative processes before commercialization improvements (Rosenberg 1976 and 1986).

Rosenberg and Kline in 1986 have defined basic aspects of innovation:

*Innovation is learning process, which involves many interactions and feedbacks in knowledge creation. It is not linear process, it does not happen smoothly and predictably, (Kline and Rosenberg 1986), but it is quite complicated process of combination of interactions, knowledge of inventor or inventor group, connections and resources that are available for creation of innovative products. (Rosenberg 1976 and 1986)

*Innovation is not depending on invention process. Research and discovery process is problem solving process, but research process is not the initiating factor of innovation. Discovery of new principles serves to some idea or new concept of product, but not opposite – product does not serve to innovation. (Kline and Rosenberg 1986)

Rosenberg and Kline in 1986 both together are defining two new implications of understanding innovation indicators:

First Rosenberg and Kline are clarifying that novelty contains not just created completely new products, but also small scale performance or characteristic changes in products, that can be considered as novelty. These small performance or quality changes over a longer time might bring major economic and technological directions. (Author: 1986, in literature mentioned Keith Smith, 2005, page 150)

Second implication what Kline and Rosenberg points out is that should be taken in consideration the importance of non-research and development aspects (Kline and Rosenberg1986) like exploration of markets for new products, engineering developments and experimentations, design activities and training. (Kline and Rosenberg1986, Keith Smith, page 150)

These *non research and development activities* were performed a lot in companies before economic crises to keep marketplace and hold clients. These non-research and development activities are not directly innovation, but are processes that are important and affects innovation performance and at the end might create over longer period of time new improved products.

From mentioned theories I can consider that even minor incremental improvements, that are changing performance or product quality and if they might bring to larger technical changes in future by having economic effect in firm's performance, can be considered as innovation as well. My research will try to find out to what extend there are such minor improvements in crises situation, because before economic crises firms tried to improve products to have some better parameters over similar concurrent products.

2.4. Innovation concept and definitions

Before doing some interviews with companies about how last 2008 .year economic rises effected companies' ability to innovate, it would be needed to define what has been understood by word "innovation", what are indicators of innovation and novelty by the existing theories in literature until now. This is particularly important to know before constructing research questions, because there might be some differences how companies' managers understood innovation and what has been considered as innovative by majority of

enterprises and practiced recently as innovative to maintain market place and keep being competitive against other enterprises.

Schumpeter is mentioning innovation as one of the sources of competitive advantage, or a way how is gained superior advantage. (Schumpeter, 1950). He was first one who suggested that firms are losing value and superior advantage of their products in longer time due to economic dynamic processes, that are tended to perfect competition. (Schumpeter, 1950; in literature V. Naidoo, 2010, page 1313). Competition makes other companies to invent and come up with better solutions what naturally makes previously evaluated products become less valuable due to the new replacement products. By innovative improvements and new products companies can again have previous place in market; only with better performance is possible to have leading competitive role unless it is not eroded again over a longer time.

Schumpeter is first, that creates originally first definition of innovation in 1934, regarding service sector innovations, he states that: "economic development is driven by the discontinuous emergence of new combinations (innovations) that are economically more viable than the old way of doing things" (Schumpeter, 1934). By his notion, he was meaning to cover five following areas:

1. Product innovation - new product or better quality of product;
2. Process innovation - new method of production ;
3. Market innovation – opening a new market;
4. Input innovation - achievement of new supply sources or inputs;
5. Organizational innovation - create new organization in industry (Schumpeter 1934; in literature mentioned I. Drejer, 2004, page 556).

Schumpeter is clarifying that true innovation does not have to be radical or unpredictable, it still is considered as real innovation if it has even minor quality improvements (Schumpeter 1939 and 1989, p. 181) and he emphasizes the cumulative nature of knowledge that is leading to innovations, because only in such way are created radically new technologies. These revolutionary new innovations are created from previously accumulated knowledge and experience, based on previous development. (Schumpeter, 1942) Nowadays innovation is also associated with economic growth and development, because Schumpeter has explained, that innovation has a role and potential to move economic systems toward more sudden changes, what is seen as development. (I. Drejer, 2004, p. 557). Schumpeter is describing opposite process of destruction if economic actors or agents are passive and not changing, then it will

lead to infinitesimal movement or as he says: " eternal movement of statistical agents..., that sink towards the center of gravity" (Schumpeter,1912,2002,p.103)

2.5. Structural theories and innovation kinds – administrative and technical innovations

Structural theories are built on design characteristics that lead to innovations, for example, professionalism as characteristics affect innovation positively because it increases self-confidence, commitment to move beyond known routines; as well it increases boundary spanning activity. (Pierce and Delbecq, 1977). Regarding communication and structural differentiation, Hull and Hage 1982 has found out that vertical differentiation affects innovation negatively. When information is transferred vertically, it inhibits the flow of innovative ideas due to more complex communication between levels; it makes more complicated inner structure and inner processes. (Hull and Hage,1982).

From structural theories innovation are divided in two kind of innovations: *administrative and technical innovations* (Daft,1978).

As "*administrative innovations*" we should understand all novelties that are incorporated in organizational and administrative processes, all innovations that are more related to its management and administrative work, not the one that are connected directly with primary work activity (Daft, 1978; Damanpour and Evan, 1984; Kimberly and Evanisko, 1981).

Administrative activities are harder to notice, because it is connected also with management style and communication style how people communicate in between but in times of crises. Administrative innovation might faster help to overcome crises when financial resources are limited and need to raise efficiency inside companies.

"*Technical innovations*" refer to all improvements and novelties that are implemented and used in primary work activity. Technical innovations concern production technologies, products or process innovations. can be process or product innovations." (Daft, 1978; Damanpour and Evan, 1984; Knight, 1967)

2.6. Innovation adoption in organizations

There are two ways how innovations are acquired or created used in firms, they might be whether generated or adopted from outside. Generated innovations are used for companies own needs or for sale to other companies (Damanpour,1998)., but the main purpose is to reach new and novel technology outcome as a new service, product, program or technology, that can be used whether by inventor company or some other company, that has bought this new innovation outcome. For company, that generates innovation, it means all processes from innovation creation in beginning that includes idea generation, project definition, designing, development of the service or product and finally marketing and commercialization. (Rothwell and Robertson, 1973; Baker and McTavish, 1976; Cooper and Kleinchmidt, 1990).

When the innovation is adapted from outside, it means for adapting company to form awareness and attitude to implement new innovative idea within company with existing resources and finding all solutions and missing resources and capabilities to assimilate innovative concept to company and realize new product or service. (Rogers, 1983; Zaltman and others., 1973).

2.7. Environment changes and its role to innovation

Innovation adaption in organization as response to environment changes makes organizations during the time improve effectiveness or performance. Environment initiates and influences to make changes in products, because environment with its customers and their demands and fashion trends are whether accepting or rejecting organizations products, and then it is up to each company whether to perform changes in response to actual environmental change or to stay and perform as before without any changes. Mainly it is manager's decisions to change and create some novel version and each management team should have good ability to predict and fell how environment will change. How managers allocate and reorganize company's resources affects rate and speed of innovation creation. Environment has strong influence on firms' ability to innovate or adapt innovations. (Fariborz Damanpour, Shanti Gopalakrishnan, 1998, page 4).

2.8. Speed and rate of adaption of innovations

Innovation researchers are agreed that both the extent of organizational innovativeness across organizational units would help to raise organizational effectiveness and competitiveness. (Fariborz Damanpour, Shanti Gopalakrishnan, 1998, page 4).

To have high organizational effectiveness in organizations is main priority for managers especially in times of crises, when efficiency should replace the lack of finances and in such way overcome the gap (Zaltman and others 1973) what creates limited resources.

Even though it seems similar terms, but their impact is different in different environmental changes. To understand the differences between innovation speed and rate Lenligh Hall in 1992 is giving his definitions and main meaning is that:"

- *"Speed relates to timing in which firm is adapting innovation. Speed shows firms ability to response fast and quickly in comparison with competitors in that particular industry."* (Lengnick-Hall, 1992).

- *"Rate, on the other hand, shows the number of innovations been adapted in particular time period. Rate describes firms ability to be innovative continuous and permanently."* (Lengnick-Hall, 1992.).

Companies with high rate of adapted innovation should possess good inner organization and all needed resources that they can bring to accord all needed parameters of new inventive product or process. This might be the case of dynamic and competitive environment with high technological and market dynamism (Kessler and Chakrabarti, 1996). In the case of economic crises, which is opposite environment to dynamic market environment, it is less likely that firms will adapt many innovative ideas, therefore speed will play more important role for innovation adaption, because customers might change their values and it is important to keep them by novel product versions.

High speed has been associated with high organizational performance. (Kessler and Chakrabarti, 1996; Lawless and Anderson, 1996) That is logical assumption, because only very well coordinated organizations with good management and good inner communication network and balanced processes can fast adapt novelties and integrate them in their old daily routine practices.

If environment changes fast, also companies should be able to respond and adapt fast new innovations, if they want to be effective and keep their place in market. Changing environment is challenging companies to reflect in shorter time and adopt quicker than predictable and stable environment.

Before economic crises environment was more dynamic. Now in economic crises situation first impression is that all every week might bring some new changes in demand, but before were regular routines and it was not panic about surviving and over living crises.

After crises market environments stayed in some waiting position, by waiting in what direction will go state economic financial situation, up or down wards. After economic crises also environmental and interaction between buyers and sellers or producers become slower when I compare it with times before crises. Because of lack of finances, customers' ability to buy get less and that also made environment to slow down trade and business temps, which affected also temps of adjusting products to demand changes. Environment played a role on innovation level and last theories of innovation adaption makes to conclude first proposal:

"Economic crises left negative effect on the rate of adapted innovations, because negative crises environment causes also affect to slower innovation adaption in companies."

This can be shortly explained by lack of finances in companies and more passive demand of products. Companies are more concern about their existence and due to demand reduction also environment becomes more passive that hinders ability of adapting innovations". It cost to adapt new ideas and concepts inside company when is not clear whether product will be sold in times of crises. There might be long period when managers need to figure out crises strategies and how to operate further with less financial incomes.

2.9. Innovation measurement difficulties and issues

As there is need to characterize and describe with some qualitative or quantitative parameters the situation in innovation and entrepreneurship, it would be reasonable to make some summary what means innovation and how to measure it. "Traditional" indicators are not matching and presenting enough insight about innovation level. (Keith Smith, 2005, page148). Due to this issue my research will contribute by qualitative research to get understanding about innovation building and creation process.

In literature there has not been mentioned some key measurements or aspects that measure innovation in processes and outputs. Mainly these measurements are done by numbers of research and development done in country, number of patents per country or how much it has been used and developed science and technology.

By the definition innovation means novelty, that some product or service has been made from other angle and by new approach. The main problems of measurements are novelty -what has been understood by word "new", and comparability. (K. Smith, 2005).

This novelty is main aspect that makes it hard to be measured. If the new invention is absolute novelty it is hard to find object to compare with and create also some reasonable measurement that would characterize something new or it affect for inventor or firm. One way how to measure novelty of some product would be some to find characteristics, which would affect outcome or give some better effectiveness compared to old one version or product, but in majority of cases novelty covers also other dimensions, that is difficult to measure aspect like learning, knowledge creation, amount of changed competences and capabilities that lead to innovation. (K. Smith, 2005)

2.10. Market orientation and innovation (Schumpeter, 1934) – opening new markets in time of crises

Global economical crisis started in 2007, when it was global economy down turn process from beginning of 2007 until third quarter of 2009, only after it started slow and sluggish recovery process. Worldwide global economic crises affected negatively manufacturing companies. Economists are explaining that due to the lack of demand also started industrial crises in recession condition. Industrial crises added just to economic crises when global demand narrowed and mainly global lack of demand for outputs in manufacturing and all sectors, can be also main reasons that lead to such economic situation as it is explained by economists. (Naidoo Vikash, 2010, Fiona Lettice,2014). This global economy affected negatively many countries and nearly all industries worldwide. We can say that market become more inelastic..

Despite this negative fact, there are companies which are recovering faster and are doing much better than other manufacturing companies. Some companies are having greater ability to withstand negative effect of economic crises (Naidoo Vikash, 2010) and higher ability to

survive. My research cases are from the perspective of five different companies in different fields and industries. There are also some companies in Latvia that are more able to get over crises better than other companies. Economists are expressing the need of better management in all companies in time of economic crises that could put in action survival mechanism. (Champion, 1999; Goad, 1999). These "mechanisms" or activities that are performed in some companies, that helps to adjust to new market and environmental conditions can be characterized by dynamic capabilities. Recently ability to innovate has been recognized as one of such dynamic capabilities, that characterizes companies that are outperforming others. (Daneels 2002; Hamel, 2000; OConnor and Rice, 2001). Market shift from elastic and dynamic market, as it was before crises to inelastic and passive after economic crises in each country is connected with the global economic crises processes, that is why ability to adjust and survive is connected with firm management and performance, inner organization and resource use. From the view of resource based perspective, Barney in 1991 admits that better management helps better to manage economic conditions by using organizational resources and capabilities. (Barney, 1991)

As one of the survival mechanism is mentioned also marketing innovations, which are defined as : *"improvements in product promotion, placement, pricing and design."* (Deshpante, Farly and Webster, 1993; Hurly and Hult, 1998; OECD, 2005) This has been actively practiced in many countries large trade businesses, especially which are related to basic products that people are buying every day, like food chains supermarkets are regularly offering some discounts. Placement of product in shelves plays important role how to motivate customers to buy certain products, similarly it is in clothes shops and other kind of shops. Price might be important for customers and also design influences decision to buy some products.

But besides marketing innovation that has been also actively performed before crises, more important role takes value of products. Bennett and Cooper nearly 30 years ago is explaining how marketing innovations is influencing customer demand and their shift of perceived values, that could be very related to market during crises *"Marketing innovation emphasizes growth by shifting customer demand from elastic to more inelastic market segments through delivery of better value – actual and perceived by the customer"* (Benett and Cooper, 1979; Hurley and Hult, 1998). This statement characterizes also that market in time of crises is becoming more inelastic and market segments are also becoming more inelastic. The only way how to overcome this negative crises effect is by creating more competitive products with higher value that are in compliance with crises time demand. Bank specialists

and managers are also admitting that customers are more careful in purchases and that makes them to characterize as more inelastic as it was before economic crises. (Kristilla Skrūzkalne, Swedbank economist, 2014)

Due to this I can develop second proposal that can be related to market situation:

Second proposal "Economic crises environment is shaping situation that larger ability to overcome crises will be to these companies that will create innovations and products with higher actual or perceived values from customers' point of view"

Innovation incorporate some content of risk or certain degree of uncertainty (Naidoo Vikash, 2010), because it means for innovation adapting organization to create and sell something new that has not been tested in the market before. Damapour in 1992 states in Industrial Marketing Management journal in his article "Firm survival through a crises,...." that: *"Innovation represents the successful exploration of ideas that are new to an adopting organization, into profitable products, processes and services"* (Damanpour, 1992; Johannessen, Olsen, & Lumpkin, 2001) This statement could be more approved in economically good conditions, but it has not been proven in majority of cases in crises conditions. Does the majority of innovations will bring profit in times of economic crises conditions when demand has rapidly declined and available financial resources are less available, has not been proven yet. I suppose that this can be true when the innovations are tested in large markets and that is giving greater opportunity to find right segment of people who will buy products. It might depend how elastic are customers and what they will evaluate. Customers' ability to spend money also will affect final decision to buy certain new products. It will not be so easy exploring new ideas, when unemployment has grown and incomes per families has reduced in times of crises.

Many researchers in literature are stating that: *"market orientation is having positive relationship with performance"* (e.g. Narver & Slater, 1990; Ruekert, 1992; Slater & Narver, 1994). Market orientation is important aspect especially in time of economic crises when customer's ability to buy is less elastic and is harder to sell things. Market orientation is defined as *"understanding and satisfying customers' needs."* Besides customers it includes also relevant stakeholders. (Day, 1994; Narver & Slater, 1990). Kohli & Jaworski (1990:1) Market orientation also can be explained like *"the implementation of the marketing concept"* (Kohli and Jaworski, 1990) Market orientation is: *"companies' ability to respond to customer,*

competitors and employee's needs" (Naidoo Vikash, 2010) in most appropriate ways to be profitable and keep competitive place in market.

Innovations whether incremental or radical can be part of the following response to possible changes of demand in market.

Researchers are mainly all consensual to the idea and I agree with this statement that: "*New modified products, which are aimed to improve organizational performance, depend on understanding and satisfying customer needs better than any other competitor, therefore it is logically true that innovation and market orientation are connected constructs.*" (Augusto and Coelho, 2009; Hauser, Tellis, & Griffin, 2006). Improvements that are made in products and processes are innovative, because it includes underlying knowledge and new product version development. Even little improvements that are implemented require knowledge, new processes and sometimes even new technologies. Managers perform these improvements when they have found out that customers will evaluate them better than previous product or concurrent products. To create innovative improvements it demands better organization and more efficient cooperation inside company to use existing intellectual knowledge and employees resources in a better way than before.

Until now from available articles about market orientation (Kohli and Jaworski (1990), Narver and Slater (1990), Jaworski and Kohli (1993), and Kohli, Jaworski and Kumar (1993), would be possible to group them in two groups- a behavioral and cultural perspective. (Naidoo Vikash,2010).

Cultural perspective defines market orientation as: "*the organization culture that most effectively and efficiently creates the necessary behaviors for the creation of superior value for buyers and thus superior performance for the business*" (Narver & Slater, 1990, page 21). Naidoo Vikash explains behavior aspect for market orientation as: "*behavioral response to the competitive operational dynamics that an organization faces during operation*" in longer period. (Naidoo Vikash, 2010).

Based on these studies market orientation is defined as: "*competitor orientation, customer orientation and inter functional coordination*" (e.g. Augusto & Coelho, 2009; Han, Kim, & Srivastava, 1998; Lukas & Ferrell, 2000). Then as we can see all dynamic processes and implemented changes that are adapted inside company due to orienting to market changes is explaining behavior aspect. Market changes to all interested stakeholders in industry, not just

customers, but also competitors, cooperation partners, subcontractors, makes company to behave differently to keep being competitive because nothing is statistic and permanent. To be competitive, it means also constantly to follow to changes and to change companies' behavior and final out put products. Market orientation is leading firms to orientate resources and coordination processes by purpose to create super value products that will satisfy customers. Innovation is this mechanism that helps to transform market orientation into superior outcome, performance or products. (Naidoo Vikash,2010). Barney is defining competitive advantage as better value crating process in such way that no other concurrent have done it before, and competitive advantage is maintained so long as replicate products has not been created. Barney defined competitive advantage with following words: "*Firm, attains a sustainable competitive advantage when the benefits of its value adding strategy are not competed away by the replication efforts of its competitors* " (Barney, 2000). As we know there are countries that might create replicate products, China is good country example, where easily replacement similar products are developed in fast speed. In such countries it is much harder to keep value and competitive advantage over others. It takes to be more efficient and faster to be one step always in front of other concurrents. In smaller counties it would be much easier to keep competitive advantage over longer period and in such way collect all first mover benefits, but still it does not cancel possibility that sooner or later it will appear similar concurrent products.

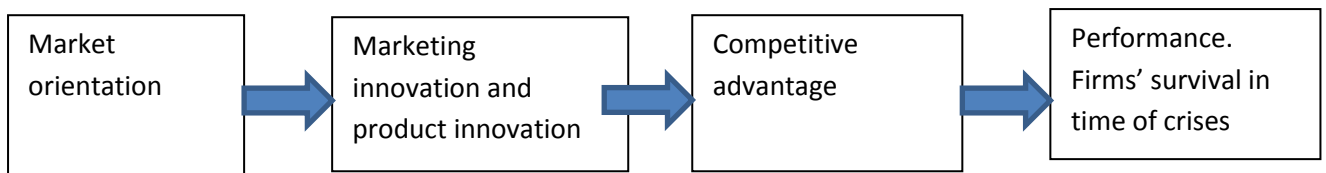
Some researchers - Deshpandé 1993; Hurley & Hult(1998) and Jaworski and Kohli (1996) have made studies, that conceptualize innovation as the "*actual mechanism that transforms market innovation into superior performance.*" (Deshpandé 1993; Hurley & Hult, 1998; Jaworski & Kohli, 1996). It time of economic growth this might be true, but how about times of economic crises that was nearly worldwide not enough research has been done yet. Whether it is true also in small country case like Latvia or some other countries that has suffered deep economic crises and when lack of finances are even more hindering creation of innovative products or marketing innovation in existing companies, when it has been hit by crises and innovation level is considered low already before start of crises, could be worth to find out about innovation role on market orientation. There it might be more likely that market orientation is creating innovative products with better performance than opposite.

Based on previously mentioned theory aspects there are main links that are connected all previously done research. First link mentioned in article "*Firm survival in crises- The influence of market orientation, marketing innovation and business strategy*" by Vikash Naidoo in 2010 is:

"In order to exhibit marketing innovation capabilities, a firm needs to adopt a market orientation approach"(Naidoo Vikash, 2010, page 1312,);

Secondly - *"marketing innovation capabilities help to develop and sustain a competitive advantage "*(Naidoo Vikash, 2010, page 1312,) and;

Third link- *"a competitive advantage allows a firm to better perform and survive in an economic crisis"* (Naidoo Vikash, 2010, page 1312,)



Conceptual model. (source from : V. Naidoo, 2010, figure 1)

Based in these links third proposal that connects product value as a result of innovative process and market orientation is following:

"Market orientation has positive relationships with higher added value of improved innovative product versions in times of economic crises"

This proposal basically express that it is not enough to produce valuable high quality products in times of crises. It can gain profit only in combination with market oriented strategies to achieve better turnover that will bring expected incomes. Added value creates competitive advantage and that is positively related to firm survival in times of crises. Besides having high added value for new products, enterprises need to be market searching and marketing innovative to be able to find new market segments for newly improved products.

Before crises market was more active and purchasing power and ability was much bigger and it was not hard to sell product unless it was qualitative and was good designed and advertised. Crises circumstances are different; the focus to find market is essential in times of crises, because many enterprises lost their previous customers in volume and that can be threat that can lead to bankruptcy. Companies need to reevaluate whether their product still will satisfy customers' needs and probably it is needed not just to find more efficient ways how to produce and sell cheaper but also think whether product matches with customers' needs and crises values. Manu companies bankrupt, because they did not manage to reconfigure their resources and adjust to crises situation and did not manage to understand that market and values has changed, for example, many large enterprises in so small country like Latvia bankrupted because ability to buy them products in local market dropped

dramatically and they did not manage to find new customers and adjust production in more efficient ways. Financial investment needed for such help is large enough and if there is not any financial support from government, then without financial support from outside, companies are not usually able to find solutions. One way of finding additional financial support is to sell some part of enterprise share to foreign stakeholders, which can also bring their customers and cooperation partners as potential "market amplification". As these crises touched many countries such market orientation approach and partly enterprises amalgamation can be solution for larger regions like some groups of countries, because due to different resources one country may have advantage over other country and if it is cheaper to produce product in one country then potential customer segments might be in other countries not just the production country. (PENG theory of add/ growing internationally)

2.11. Innovation adoption features of organizations in four different environmental conditions (EC)

Theory for organizational structure and innovation adoption, a role of environmental change

As environment is influencing properties and behavior of firms (Ackoff, 1981), then environment as open environment system plays important role to firms' competitiveness and innovativeness. (F.Damanpour and S.Gopalakrishnan, 1998, page 11).

Firms are searching for balance with environment change; they have to change in response to environment change also firm's behavior, structures, strategies and processes. Due to environment is a complex system with multiple dimensions (Ackoff, 1981; Scott, 1992), researchers are focusing on dynamism dimension, because dynamism is describing environmental change (Scott,1992) and dynamism as environmental change is more closely related to innovation capability. (F.Damanpour and S.Gopalakrishnan, 1998, page 11).

Theory indicators are based on previously made theories, when Dess and Beard (1984) described dynamism in two components: stability and predictability – meaning - extent of turbulence (Jurkovich,1974). Four environment structures help to find prepositions for relationship between firm's structure and innovation. In this framework innovation is seen as adapted innovations in firms, meaning where firms should adjust inner resources to create novel products, but not to create novel idea themselves.

Innovation could be analyzed through different environmental and institutional aspects like rationalistic, institutional, political and it can give better understanding, but it makes it hard to get common general results, because perspectives of analyze is so different. (Abrahamson, 1991; Frost and Egri, 1991; Van de Ven and Rogers, 1988; Wolfe, 1994). Due to this problem still many researchers are agreed, that in case when "research method is having certain perspectives, it can be applied in certain contextual conditions" (Abrahamson, 1991; Damanpour, 1991; Meyer and Goes, 1988; Poole and Van de Ven, 1989), therefore Damanpour environmental condition analyzes (1998) can be related to crises environment from point of dynamic change and in such way also my following research cases can be categorizes from their structure and ability to innovate. Different industries ability to innovate in certain environmental condition might differ; therefore also this method could help to understand innovation ability for different firms. Environment as complex system also describes and is very much connected to firm's competitive element. Innovation also is creating competitive element that is why environment is connected with innovation, because the purpose is the same – to create better outcome and outperform others with better performance and more valuable products. (F.Damanpour and S.Gopalakrishnan, 1998; Ackoff, 1981; Scott, 1992)

This method also approves previously outspoken preposition that states: *"organizational effectiveness is high for firms, where environmental change fits the structure and innovation adoption characteristic portrayed."* (Doty, 1993).

To find out what incremental improvement processes are still performed to create some changes and do there are some supportive activities like - in the same level organized inner personal learning courses that promotes innovation process, I need to find out company's ability to innovate in conditions that has changes due to sudden economics crises. This theory what I will describe and explain comes from journal of "Engineering of technology management Jet -M", 1998., written by Fariborz Damanpour and Shanthi Gopalakrishnan, graduates of school of management in USA. Theory is defining four different environment conditions using stability and predictability variables that describe environmental changes. In all conditions there are also mentioned areas of business that most probably and often are operating in these four conditions and described also how usually in such conditions these companies are able to innovate. Mentioned areas helps to understand more closely differences of ability to innovate in different conditions, because you can immediately imagine for example film industry ability to innovate or some other field and its

typical operation characteristics. This framework helps to examine contextual and organizational variables than affects organizational innovation. Fariborz Damanpour, Shanti Gopalakrishnan, (1998) theory helps to predict structural characteristics that help innovation adaption in four different environmental conditions. (Fariborz Damanpour, Shanti Gopalakrishnan,1998.)

Table of four enviromental conditions depending on enviromental stability and predictability

Enviromental stability (Rate of enviromental change)		Environmental predictability - Regularity of environmental change
Stable (low)	Unstable (high)	
EC1 Stable, predictable <i>Innovation adaption:</i> Rate –low, speed- low <i>Innovation type:</i> Incremental and technical <i>Innovation source:</i> Imitative <i>Organizational form :</i> Mechnainic, Chierarchy	EC3 Unstable,predictable <i>Innovation adaption:</i> Rate – high, speed - moderate <i>Innovation type:</i> Technical and administrative; Incremental and radical <i>Innovation source:</i> Imitative and incumbative <i>Organizational form:</i> Organic and clan	Predictable (high)
EC2 Stable, unpredictable <i>Innovation adaption:</i> Rate –low, speed- fast <i>Innovation type:</i> Some radical and mainly incremental <i>Innovation source:</i> Imitative and acquisitive <i>Organizational form:</i> Market Mechanistic	EC4 Unstable, unpredictable <i>Innovation adaption:</i> Rate – high, speed – fast <i>Innovation type:</i> Incremental and many radical Technical and administrative, <i>Innovation source:</i> Incumbative and aquisitive <i>Organization form:</i> Adhoracy Organic	Unpredictable (low)

Fig. 1. Innovation adoption features of organization's ability to innovate in four environmental conditions –EC.

¹Source. F. Damanpour, S. Gopalakrishnan/J. Eng. Technol. Manage. 15 (1998) 1–24

¹ Source. F. Damanpour, S. Gopalakrishnan/J. Eng. Technol. Manage. 15 (1998) 1–24

Further on I will explain four types of innovation features of organizations that innovate in four environmental conditions (further used "EC" for environmental conditions).

Four different environmental conditions (EC)

Environmental condition 1 (EC1) : stable, predictable

In this environments changes are emerging slowly and predictable. The environment lets to adapt innovations infrequently, that is also reason why organizations can also adapt innovations in planed and structured way. Due to this planning and predictable environment, rate on the adaption is low. (F.Damanpour and S.Gopalakrishnan, 1998) The examples of organizations in this environment are hospitals, universities, gas and electric utilities and food packing companies. Mainly innovations are incremental, innovations are based on existing knowledge (Henderson and Clark, 1990) The main concern for companies and organization in this group is operation and actual work than innovation. (F.Damanpour and S. Gopalakrishnan, 1998)

The structure of such companies is very structured in hierarchy form and all power is concerned in top management, organization operations and well developed procedures affects employees behavior and, as it is known, such hierarchy structure is mechanic and inflexible and this inhibits innovation development. (Zammuto and O'Connor, 1992).

This environment does not promote to develop higher professionalism and specialization.

Enlironmental condition 2 (EC2) : stable, unpredictable

In stabile but unpredictable environment, when "*the pattern of change is unpredictable*", companies are innovating not continuously and frequently. Unpredictable environment makes companies to be alert and to be able to adapt innovation quickly to keep competitive advantage. Damanpour states that : "therefore companies in this group are able to innovate quickly and adaption speed is fast, when it is needed" (F.Damanpour and S. Gopalakrishnan, 1998) Examples of organizations in this group are fashion clothing, music industry, mail-order retailing, advertising companies and personal computer manufacturers.

For innovation resources are used acquisitive and imitative resources. (F.Damanpour and S. Gopalakrishnan, 1998) .

These companies are having external focus, since quick decisions need to be made as response to market change in unpredictable environment, therefore companies are resembling "market" form (Quinn and Hall 1983), where managers are concerned to keep competitive advantage of company in unstable environment, and it demands to react in integrated and quick fashion (Mintzberg, 1979). The structures of such companies are: "*with high centralization and usually are control-oriented and mechanistic.*" (Zammuto and Krakower, 1991).

This is environment condition that could characterize crises situation in countries which were affected from negative impact, which made environment more stabile and passive because the changes did not occur so often as before crises, but meanwhile is hard to predict how situation might change in next following months in each industry.

Enlironmental condition 3 (EC3) : unstable, predictable

In this group the pattern of change is predictable and the rate of change is high, because the unstable environment demands to adjust. The predictable environment gives time to plan innovations, but these plans must me more complex and more flexible than plans in environment EC1. . (F. Damanpour and S. Gopalakrishnan, 1998) Managers could be able to innovate all the time, it cannot be the goal of entrepreneurship, but innovation should be planed and managed wisely due to limited resources and time restrictions, managers should plan resources and decide which innovations to develop that are more urgent, and which drop. (Jurkovich, 1974)

Situation in 1990s was having such environment, when examples of companies in this group where chemical companies, financial services firms, hospitals, it includes some electronic firms and film industry.

The speed of innovation is moderate. As situation is not so urgent, the rate is of adaption is moderate. Such environment might be when countries will start to recover from deep crises affect in the next following ten years, depending on each European state economy condition.

Usually organizations rely on existing knowledge to refine existing products and services, but also radical innovations are supported in EC3 environment due to continuously changing environment.(F.Damanpour and S.Gopalakrishnan, 1998). Zara and Coving explains that innovation is kept by finding new opportunities, they explain that: "*These organizations*

retain innovative momentum by continuously searching for new design changes, opportunities, and more economic ways of producing their goods and services” (Zahra and Covin, 1994.). They rely on incubative source and usually structure of such companies is flexible, because frequent changes require changes in administrative policies, programs and structures. As administrative, so technical innovations are supported, organizations concerns not just for production, but also for development of employees. Such organizations have clan structure, because decisions have to be spread fast from top to productions, when fast decisions are taken. The example could be some popular goods and food production fabrics or large companies. (Quinn and Hall, 1983)

Clan form (Quinn and Hall, 1983) puts main effort to be united team, and success in company is defined in terms to customers and clients and satisfaction for organization members. (Hooijberg and Petrock, 1993). Zammuto and O’Connor is explaining sensitivity to customers’ needs following: *“Sensitivity to customers’ needs makes companies to create products that satisfy clients’ demands, and for company members company tries to provide climate, where employees can achieve better result and develop themselves. Structure usually is flexibility – oriented and organic. Such organization can be often characterized with high differentiation and professionalism.” (Zammuto and O’Connor, 1992.)*

Environmental condition 4 (EC4) : unstable, unpredictable

This environment can be characterized as hyper competitive with high velocity. (D’Aveni, 1994), therefore the rate of innovations is high with high adaption speed. To keep competitive place in so dynamic and active environment, companies has to create incremental and radical innovations. Companies’ environment is creative, it is created culture of innovativeness that helps to create innovations, also structure is organic and elastic of such companies that motivate employees to take initiative, risks and face challenges.

These innovations have to match with *magnitude of change* in existing system inside company as with suddenness of change from assimilation of new practices. (F.Damanpour and S.Gopalakrishnan, 1998). The examples of firms that fit in this environment is telecommunication companies, leading computer manufacturing companies, research oriented biogenetic companies and pharmaceutical firms. (F.Damanpour and S.Gopalakrishnan, 1998). International teams are formed to use all knowledge and promote development of innovations. Such companies are opened to experimentations and innovations to be on the leading edge in the industry. (Hooijberg and Petrock, 1993).

3. Methodology

Before choosing methodology it was important to remember purpose of thesis and research question to find best suited method. Latvia as a country in this research is taken just as a context country where research is done. Similar research might be done in other countries that also suffered from last economic crises. Culture, history, previously established structures in companies and larger enterprises, other society norms, traditions and religion might have impact on result as these are elements that influence common environment in which companies operate, but that is hard to measure and categorize, therefore research results are discussed from previously discovered proposals from other researchers from the perspective of dynamic capabilities.

The purpose of this thesis is to extend the understanding how firms are adapting to crises environment with its dynamic capabilities and what needs to be changed to improve firms' performance and overcome crises negative affect to raise organizational performance and be successful

By qualitative semi structured interviews will be explored some companies from different industries to reach understanding how firm's inner dynamic capabilities are influencing adaption process to large disruptive events like last economic crises and how dynamic capabilities practically are affecting innovation process in companies.

To find answer to my research question, I choose to use semi structured interviews, because this type of interview leave space for some other unexpected directions of conversation to find answers that could better explain firms inner organizational aspects and ways how they coped in crises situation and in which level innovation played a role to overcome crises situation. Semi structured interviews gives the freedom to explore general opinions in detail, that is main advantage why this kind of interview type was chosen. Some structured questions were planned before because there are needed some guiding questions that holds interview to chosen problem field but also gives possibility to move to other unexpected directions. Qualitative answers are descriptive therefore it is best suited to semi structure interview type, because this interview lets to reach better descriptive answers in depth. (Yin, R., 2009).

Five cases study methodology was used to determine how economic crises has affected firms ability to innovate and how financial crises affected entrepreneurship activities. My research question ""How does dynamic capabilities foster creation of innovative products

in times of economic crises?" could give answers that more describe processes in companies that are leading to adapting to crises environment are related to dynamic capabilities.

Five semistructured interviews were conducted from different industries, because it might give better understanding about dynamic capabilities and innovation level in country in times of crises in more than just one industry. The best result of research question would be reached by conducting more interviews from all possible leading industries in country, which might be further task for broader research. My interviews can give inside and credible answers to my research question because until now it has not been done lot of research in innovation in crises environment. Interviews were conducted from largest chocolate and sweets production company, small honey production company, medium large car metal surface parts montage company, road building company and working clothes designing and producing company.

To gain deeper situation analyzes qualitative research is done by conducting interviews by phone due to time and distance constraints. Companies were located with 100 or 200 km difference in Latvia country. Managers are busy to meet in person and reaching respondents in appropriate time by phone was more suited in these cases. Conversations lasted from 40 minutes until one hour long. The lack for telephone conversations is that is not possible to collect information or impressions from body language and was not possible to write them in dictaphone, but during the interviews all answers have been written down by hand and later transcribed as soon as possible that nothing is forgotten. Researcher plays important role to find out right answers because it requires not just be well informed and preparing with questions before start to conduct interviews, but also it requires good interview and communication skills, that dialogs goes fluently and all relevant information need to be discussed.

Positive aspect that Latvian language is my native language, therefore interviews were possible to conduct without language barriers and gain better and more detailed understanding. The questions were structured to prompt the interviewee to answer from his perspective without influencing respondent about firm's performance and dynamic capabilities. Deeper understanding in fields or themes that previously was not predicted to hear from respondent was reached with asking additional questions. If conversation leads in some particular directions, it was more researched by asking additional open ended questions that might come from sub questions or from the theme where respondent was leading his answer.

Questions that were constructed in research is more focused on dynamic capabilities, because dynamic capabilities are promoting fitness with environment and are very much

connected with innovation. By activating dynamic capabilities firms are modifying existing resources that leads to innovative product versions, which more suits with environment. (Makkonen,2014; see Eisenhardt & Martin, 2000; Helfat et al., 2007;Winter, 2003; Zahra and others, 2006; Zollo and Winter, 2002). The firms balance or fitness with environment is especially important role is in time of crises, and that makes role of dynamic capabilities more important Eisenhardt & Martin, 2000; Zahra et al., 2006),. Research questions are constructed by purpose to address firms' activities that could lead to dynamic capabilities that are reorganizing and changing firms' performance approach and strategies, because the aim is to find out what exactly firms has changed in their performance in last years of crises.

Crises environment is turbulent and unpredictable environment with negative effect on business activities. Firms need to make changes to fit with environment changes and through modifying and adjusting existing tangible and intangible resources, dynamic capabilities also promote fitness with environment Many researchers has come to similar conclusion and they state that: *"Dynamic capabilities are very much connected with creation of innovation because through renewing, extending and modifying existing resources are created new innovative products or innovations"*.(Makkonen,2014; see Eisenhardt & Martin, 2000; Helfat et al., 2007;Winter, 2003; Zahra and others, 2006; Zollo and Winter, 2002).

By questions that focus on dynamic capabilities dimensions, hopefully will be reached answer how innovation activities has been affected in times of crises, because innovation is closely connected with firms' performance and dynamic capabilities. (Doty, 1993)

To find out what kind of modifications were maid and how resources were reconfigured main questions were constructed that could lead to dynamic processes in companies: *"How decision making process in your company happens? Has there something changed in company management and organizational performance in times of economic crises?"* This is question that leads to dynamic capabilities, because usually managers' are initiating changes and it is their task to over evaluate and reuse existing resources in a new more efficient ways - the meaning of dynamic capabilities.

Other important question to find out dynamic capabilities and processes in performance change is :*"What is particularly important to reach higher performance, what has changed in company in times of crises?"*

Regarding innovation processes main questions were constructed:

1. *" How does the financial crisis has affected your business and innovative activities in your company? In which ways and how? Can you give examples?"*,

2. *"What resources play a key role in creating new products, how happens improvement initiation process to create new versions?" and*
3. *"What kinds of improvements are more adapted- radical or incremental improvements, how often such improvements are created and how they are appearing in company?"*

Main question regarding crises affect and entrepreneurship activity in times of crises was question:

1. "Does the economic crisis give some new business opportunities for your company? If yes, in which ways?", because ability to see opportunities and find solutions creates competitive advantage and gives might give chance even to grow. New opportunities might make also companies to over evaluate strategy and inner values, but it is part of adaption process to new crises environment.

As defined by researchers dynamic capabilities dimensions that are mentioned previously in theory part are: *"sensing and seizing, learning and knowledge creation, integration, reconfiguration and leveraging"*. (H.Makkonen, 2014; Ambrosini et al., 2009 Barreto, 2010; Bowman & Ambrosini, 2003; Teece, 2007; Teece and others, 1997). To address this theory and find out most important dimensions of dynamic capabilities, research questions were made that could lead and refer to these named dynamic capabilities dimensions. Question that addresses this theory has been constructed:

"Which resource has the greatest power in decision making and how these resources have changed the role in the times of financial crisis? -Knowledge; Technology; Finances for innovation and the development of the research process;- Lack of trained and experienced human resources , - Government support; Laws and regulations , or other aspects ? "

There has been constructed also other questions with sub questions, that is related to previously mentioned theory of innovation and dynamic capabilities (look the questions in appendix).

Analyzing answers I hope to find some common patters related to dynamic capabilities, processes of innovation creation and main reasons how innovations are created. Answers can cover firms changed strategy approaches that firms are using to keep competitive advantage and overcome crises negative affect and to find out how inner resources are organized to build better performance.

During dialog some additional probing questions were asked to gain better understanding and explore the comments made during the interview. The advantage is that,

this format of semi structured interviews lets to ask not planed additional questions and give more freedom also to speak about more sensitive themes in appropriate manner.

Interview skills were needed because there might be answers what are not matching with my previously accepted proposals but me as researcher supposed to be able to find out more information also in other unexpected directions. Some good preparation before was needed and also meanwhile the interview need to follow, that dialog theme still matches with research field topic, therefore before prepared questions helped not to lose track of theme.

Confidentiality should be obeyed to protect the sensitive companies' information. It is also a disadvantage of semi structured interviews because precise numbers and technical measurement parameters of production process nobody was willing to give, as it is part of competitive advantage and commercial secret information. It is my duty as a researcher to respect each person's wish to keep secret information and confidentiality, therefore by starting each interview with persons I marked that they are not obliged to answer more than company confidentiality allows and that in my research report companies names will not be noticed, just the industry to ensure companies secrecy and confidentiality. Interviews were conducted from one of the largest chocolate and sweets production company, small honey production company, medium large cars metal surface parts montage company, road building company and working clothes designing and producing company.

This is qualitative type of research and it is expected to find out qualitative descriptive answers, besides just approving or denying previously accepted proposals. Research should contribute by giving directions and ideas also to other companies not just in Latvia but even in other countries, that also suffered from crises, how to promote innovative ideas and improve

Companies were selected by available information online, but mainly that the common fact that these companies were mentioned between most fast growing companies in last years. As the growth can be stimulated by some dynamic capabilities or other entrepreneurial aspects, I choose to interview them, because these companies can give example to other companies what needs to be improved to overcome economic crises negative effect.

3.1. Description of five interviewed companies

1. Company that works in car manufacturing industry. Company which produces metal housings for car surfaces. In company works 40 people. Company has strict structure and has been respected job positions, for example, mechanic employees are obeying to managers and orders from top management. Company had to reduce employees in crises time, but now it is tendency to employ new employees, because the demand of production has grown recently. Company receives required technical parameters for special car models with its measurements and drawings and produces it, after production, assemblies are shipped to clients and they continue to adjust and montage the rest details of the car. Company is producing just parts of the car, it is half product. Production mainly is oriented to foreign market and foreign customers. The owners of the company is Germans, production factory is located in city Valka some 130 km from Riga the capital city of Latvia.

Ability to innovate and create something new is limited due to precise montage details that are given by clients demand, therefore it is hard to change parameters or design because it will not fit with final car model. Company is competing by fulfilling client's wishes in timely and qualitative manner. Final product can be improved from quality aspects. Mainly demand of metal parts of cars comes from Germany, Austria, Belgium and other countries, but nothing is produced for Latvia.

2. Company that designs and produces working people clothes, which are meant to wear in work. In Latvia it is employed approximately 160 workers. Crises affected negatively enterprise, company had to reduce the number of workers and release some employees as a result of crises effect, but now situation is more stable at this moment. Company is one of the market leaders in industry and has built large customer base in Europe, mainly production is sold in Nordic countries. Production from new designs creation to tailoring is performed also in Latvia, but top management is located in Sweden, owners are Swedish company. Market research and management decisions are done in Sweden; work is performed in cloth contact with Sweden management team. Company regularly plans what will be produced and is sensitive to market change, innovative new working clothes designs are created based on most sold designs and client wishes. Company could overcome economic crises based on broad sourcing and global supply chain, in such way company can be cost efficiency.

3. Chocolate and other sweet production company. Totally around 700 employees are working in company. This company is one of the largest sweets manufacturers in Baltic countries that nowadays exports to 25 countries. Company is popular with its chocolate candies; it is one of the few manufacturers in Europe that produces chocolate from beans until final product, not from half produced chocolate powder. Company is having 140 years' experience in sweet production, it is successfully combining historical heritage with innovations, which mainly are created to meet foreign customers demand.

Knowledge and historical popularity is giving market leader position.

Short history of company: Originally, Theodor Riegert, a German entrepreneur, is considered the founder of confectionery industry in Latvia. He gained knowledge based on other land experience and founded a small factory in Latvia. His factory grew and become one of the largest sweet manufacturers in Baltic and even in Russia. Another famous entrepreneur was Vilhelms Kuze, who also established his company in 1910. Due to advertising and high quality of chocolate products, his small business grows to stabile company. Both entrepreneurs were united and in 1930 company employed 500 people and exported to England, France, Lebanon, Egypt Palestine. During world wars owners were changed and in 1940 factory was denationalized to Soviet Union, it produced sweets to all Soviet federation. After recognition of independence of state in 1991, it was consolidation of major confectionaries, and company becomes the main manufacturer of sweets and confectionaries.

4. Honey collecting and honey products producing company, which employs up to 5 employees. Main products are collected honey that is mixed with different kind of berries that gives different tastes and value in eyes of customers. Honey products are ecological without any additives. Mainly they are innovative honey mix with berries is sold in state largest cities in one of the largest supermarkets and some smaller shops as well. Honey is collected from local fields Company use regional earth around city and sometimes more further, because there is no restrictions of honey collectors.

5. Road construction company, that provides road construction, reconstruction and repair. Company produces asphalt in 3 production facilities, as well company has high level laboratory that can also be used mobile on the building place to control quality of used raw materials. Used manufactured asphalt has gained CE mark, which is recognized worldwide. Since last year little bit less than 50 % of shares are bought by German company. Company

has projects in Europe, Germany helps to find cooperation partners. Main market driven and quality driven decisions are taken by German share holding company. Ability to innovate is limited with state tenders and rules in norms in road building industry and balancing costs of used raw materials.

3.2. Short history of economic development in Latvia

History and cultural norms might influence answers or give some biased responses in researched companies. Latvia as a context place where interviews are taken has a values and social, cultural and political norms in a way different from larger and more developed European countries.

Before last economic crises nobody in Latvia could not predict and imagine that so soon again will come some economic downturn, economic crises with its consequences and all negative side effects with financial difficulties and so sharp economical shift..

In Latvia after 1991, when country get back independent state status after soviet occupation years, economy from soviet union communistic times planed economic model shifted to free capitalistic economy and all large soviet times productions fabrics stopped to exist and operate in Latvia. It was time when economy shifted and also state currency shifted, instead come new small enterprises, they had to reorganize the style and structure but effect still was from previous times when mainly hierarchical and controlled style management was in majority of companies. 1990 years was hard economic times, but slowly country recovered and after joining in Europe Union state received investments from Union, that in a way helped more to develop economy and promote very fast growth until the world economic crises.

Once financial impact from America reached also Latvia country in the august 2008, it bring large negative effect on entrepreneurship and innovation as well, because country marked can be described as small and opened economy which is connected with European market and negative outside effect influenced more as it was expected in common situation, because production is not so developed and retail business in dominating in last years. Crises showed and revealed pre crises weaknesses of each country in the world. (OECD outlook 2012, Technology and Industry outlook 2012).

Latvia is small country with only 1,6 million people and it was very much affected from economical processes in Europe. Latvian entrepreneurs until now was more thinking locally, they were selling and producing products that match with Latvian customer's needs and values, but crises showed that state is very dependent from Europe economic situation because now Latvia is part of Europe union and it is also part of Europe market and banks are financially connected with other larger banks and other states currencies.

4. Results

This not the purpose of qualitative research, more results are described in discussion part, but for clarity will look through previously accepted proposals before doing research:

Proposals	Approval
1. <i>"Financial crises as more passive environment, in contrast with dynamic pre crises environment, affected negatively firms' ability to innovate":</i>	Partly supported. Some industries are affected negatively like road building industry and some industries are not able to create some changes due to the technical precise specification and parameters that need to be followed, like it is in car manufacturing industry. There are other companies that have started to create new improved product versions by activating dynamic capabilities in faster speed than it was before crises. Companies are sensitive to environmental change.
2 <i>Second proposal "Economic crises environment is shaping situation that larger ability to overcome crises will be to these companies that will create innovations and products with higher actual or perceived values from customers' point of view"</i>	Supported in majority of cases.
3 <i>"Market orientation has positive relationships with high added value of improved product versions in times of economic crises"</i>	Supported in all cases

4.1. Findings about economic crises impact on entrepreneurship and innovation

Crises left mainly negative effect on entrepreneurial activities, and after analyzing interviews impacts are following:

Companies lost previous customers and even market segment groups. This was expressed by clothes design and production company, road building company and company that produces metal surfaces for cars. This negative effect made companies to find solutions how to find new customers and follow more carefully to market changes. All interviewed companies express that customer wishes are priority and are initiating changes.

The lack of finances does not allows to create more qualitative final products in field like road building industry, where entrepreneurship is very much connected with state regulations, norms and financing.

State issued tenders for road renovation jobs are putting constrains to companies due to the work that needs to be done and financial price to win the tender, but lower price lets to fulfill job in minimal required quality specifications. Qualitative improvements also is categorized in product innovation group (Schumpeter, 1934) As higher quality of roads would cost more, ability to create more higher quality roads is limited from financial resources and state issued norms of tenders. Innovation can be analyzed also through institutional, political and other environmental aspects. (Abrahamson, 1991; Frost and Egri, 1991; Van de Ven and Rogers, 1988; Wolfe, 1994).. Clothes designing and manufacturing company also admitted that they lost previous market segments and now they are doing market research to build again stabile place in market.

Companies had to dismiss some part of employees due to sharp drop in product and service demand that reduced turnover in the first two years of economic crises. This is especially related to medium and large size enterprises that employ more than 50 employees. Firm's ability to innovate depends on limited financial and human resources. Employees were dismissed in the downturn point of economic crises nearly in all interviewed companies, except honey production company, that started to operate later in 2011.

Largest chocolate manufacturing company mentioned, that local country - Latvian market cannot anymore provide with enough customers that would guarantee existence and needed earning, as it was before crises, when large part of products and services were sold in

Latvian country. This company even had to reevaluate the companies' mission and values in times of crises and they decided to sell production to foreign markets. Sales representative explained: *"Economic crises create tendency to grow, we are oriented to export. Enterprise has reorganized and over evaluated its goals and vision, it has changed. The strategy is changed. Our vision is tended to export and we have explained also this to our workers. We sell abroad and also produce for foreign."*

Some particular products are having opportunity to sell their products better than before crises, customers evaluate particular products in time in crises and they form separate exceptional group of products that has not suffered from crises effect - chocolate, economic honey with berries, caramels and other products. This can happen because these products are having higher added value that customers are evaluating. (Barney, 2000).

5. Discussion

5.1. Findings after analyzing answers from interviews

Of course lack of finances is making constraints and is narrowing down ability to invent new products. Besides finding inventor or research group that creates new products, there might be some dynamic capabilities and approaches that can foster creation of innovative products. Due to renewing and regenerative processes enterprises might create new ways or slight differences or incremental innovations. (Schumpeter, 1934)

In following chapter it will be analyzed interviews from themes that come up after summarizing all five interviews:

1. Reorganized ownership of companies

Companies have reorganized ownership by selling shares to some foreign owner and in such way are gaining additional financial resources and companies start to perform as daughter enterprises under some larger European enterprise. By open system view it is assumption that firms adapts to environment, at least to some extent, with its limits of firms resources and capabilities. Firms are financially limited and as solution are found reorganizing and selling some shares of company. In such way are acquired additional resources to adjust to crises environment. In literature regarding dynamic capabilities it is mainly emphasized need for firms to change their resource and capabilities and to adapt to environmental change, because inherited routines will lead to less adaption and lead to observing environmental changes instead of adapting to environment. (Helfat and others., 2007).

2. Orientation to global market

Market orientation is: *"companies' ability to respond to customer, competitors and employee's needs"* (Naidoo Vikash, 2010) in most appropriate ways to be profitable and keep competitive place in market.

Many researchers in literature are stating that: *"market orientation is having positive relationship with performance"* (e.g. Narver & Slater, 1990; Ruekert, 1992; Slater & Narver,

1994). Market orientation is important aspect especially in time of economic crises when customer's ability to buy is less elastic and is harder to sell things. Market orientation is defined as "*understanding and satisfying customers' needs.*" (Day, 1994; Narver & Slater, 1990). Kohli & Jaworski (1990:1)

Some researchers have made studies, which conceptualize innovation as the "*actual mechanism that transforms market innovation into superior performance.*" (Deshpandé 1993; Hurley & Hult, 1998; Jaworski & Kohli, 1996).

Companies are gaining access to foreign market through newly established ownership, because European shareholders with headquarter enterprise is contributing with its management approach and providing with additional clients and cooperation partners for product and service selling. This is related to chocolate factory, work clothes design and manufacturing, car industry company that fabricates metal surface for other car building factories in Europe. Small honey producing company has gained high growth of turn over due to selling its product to one of the biggest grocery supermarket chain, that belongs to foreign owner as well- Sweden. Through newly reorganized and gained ownership with foreign partners ore shareholders, are opened new markets, which Schumpeter is classifying as one of innovations category: "Market innovation – opening a new markets". (Schumpeter 1934; in literature mentioned I. Drejer, 2004, page 556). Cultural norms play important role in each country. Each country will have different norms, traditions and customer behavior, which is very important to know and take in consideration before creating any opening new market. Market innovation is when new markets are opened to sell product.

Novelties are created by the market initiated characteristics. Important role plays external contacts and communication to gain information about favourable changes and then company tries to adjust and produce expected product what people are buying most. Innovation is connected with market demand in a way more than it was before crises when with good marketing and advertisements was possible easy to sell even things that people actually did not expected to purchase.

Company has really integrated all existing resources to reorient sales for outer global market. Respondent was stressing that companies turnover has grown in recent years a lot due to selling product abroad, and that all business values and strategies has been changed to adopt for selling in other countries.

Sales representative explained: "*Economic crises create tendency to grow, we are oriented to export. Enterprise has reorganized and over evaluated its goals and vision, it has changed.*

The strategy is changed. Our vision is tended to export and we have explained also this to our workers. We sell abroad and also produce for foreign."

It gives more approval that approach and strategies that was working in stable economic environment might not work in economic crises environment and in fact each company would need to answer again main questions what normally are asked in business: "What value and what pain we solve for customers, do they still evaluate the same our product? How we are earning money, in which markets we are selling, which is our main customer segments?" In crises need to reorganize all strategies, because markets changes and might be worth to consider to sell abroad, if in so small country like Latvia, where lives 1, 6 million people purchasing ability has been dropped due to smaller salaries and all market has become inelastic and frozen..

To implement new strategy chocolate fabric with its 700 employees organized inner meetings and regularly informed all employees of changed goals and strategic decisions, because each employee needs to know vision and main focus they are working for to reach larger synergy and higher efficiency. People need to have the same goal, which is management responsibility to inform all employees. I consider it as important inner organizational capability, because common motivation, learning and integrative approach gives better output. Literature describes many dimensions of dynamic capabilities; the essential dynamic capabilities are: "*sensing and seizing, learning and knowledge creation, integration, reconfiguration and leveraging.*" (H.Makkonen,2014; Ambrosini et al., 2009; Barreto, 2010; Bowman & Ambrosini, 2003; Teece, 2007).It is organizational capability. Only when team is able to be united and effective, it can also think about different kind of improvements and variations of products efficiency and innovative outcomes, in this case – different kind of chocolate candies and other sweets.

3. Higher value products gain competitive advantage in time of crises

Products are all the time improved to provide better and higher value and adjusted to customer values and demand characteristics. Barney is defining competitive advantage as better value crating process in such way that no other concurrent have done it before, and competitive advantage is maintained so long as replicate products has not been created.

(Barney, 2000). This strategy of building sustainable advantage by creating higher value products, has been taken in consideration all respondents. Higher ability to overcome crises is to enterprises that provide higher value products than customers are expected. In such way is overcome barrier of inelastic markets. Companies are reaching customers by providing qualitative products in timely manner in such way they reach inelastic market segments *"through delivery of better perceived and actual values"* (Benett and Cooper, 1979; Hurley and Hult, 1998).

The higher delivered value of chocolate fabric that provides competitive advantage is in their full technological process. Representative of export department told: *"We are the only one compared with many European sweet producers, who are having full chocolate processing process. We are nearly the only one in Europe who performs full chocolate creating process in factory - from beans, not from powder or half produced chocolate products, as it is done in other European factories. They buy powder or half made components from other factories and then make chocolate, but we make all ourselves. Beans we transport direct from Gana, Africa and we start chocolate creating process from beginning until the end and that is the main reason why we have so high quality."*

4. Knowledge use as refining dynamic capability

Some company like chocolate fabric is having higher performance because company has long experience and knowledge of creating sweets and chocolate that has been accumulated around 140 years, relatively long experience to accumulate knowledge is also to road construction company, honey production company manger has experience around 20 years in honey collecting. These new innovations are created from previously accumulated knowledge and experience, based on previous development. (Schumpeter, 1942) Knowledge and resources is building also dynamic capabilities, which are united aspect that unites dynamic capabilities with innovation. Schumpeter and other researchers are declaring that *"the evolutionary fit between the firm and the environment is the measure of performance."* (Nelson & Winter, 1982; Schumpeter, 1934).

Product innovations are created mainly based on the previous knowledge and experience of employees and their suggestions how to improve production process and production technology. (Chocolate fabric, clothes production. Especially valuable are employees with long experience in industry (chocolate fabric) and managers that have leading experience in crises and stress situation to find unordinary solutions and also professional experience in

production industry (car building industry, road building, clothes production industry). Schumpeter is clarifying that: "innovation is built from entrepreneurs' prior knowledge and resources. (Schumpeter, 1934). Inner learning process of employees also helps to hold productivity and reach higher experience and suggestions how to improve process and product to reach new qualitative parameters of products that would satisfy customer demand by their taste and values. This is case of chocolate factory, clothes production company, honey products with berries. Besides customer demands companies themselves have nominated firms typical quality criteria that are also added into new product improved version. This relates to all interviewed cases: chocolate fabric, road building company, clothes factory and car metal surface production firm, honey firm.

Some products are having even higher expected turn over in times of crises because customers has changes values in the favor of its product, like it is in case of ecological honey products with different tastes of natural berries. Barney is defining competitive advantage as better value crating process in such way that no other concurrent have done it before, and competitive advantage is maintained so long as replicate products has not been created. Barney defined competitive advantage with following words: *"Firm, attains a sustainable competitive advantage when the benefits of its value adding strategy are not competed away by the replication efforts of its competitors "*(Barney, 2000). Customer evaluate natural product that has high actual and perceived value because in contrast to other products that are full with additives, this product does not had any as chemical additives. Product as such is novelty in food industry, besides traditional honey product and it provides with higher quality. Similar unexpected growth of demand in crises situation is after chocolate sweets, caramels, and some other products. (There would be needed further research to find out the list of products that are demanded especially in time of economic crises. This list of products might differ in each country due to different customer values, that are affected by cultural values, tastes, norms and perceptions in society as well) Chocolate candies are having also extraordinary high quality due to the rarity of its production process. All the time has been created new improved chocolate sweet candies that satisfy customers' needs. All improved product versions of chocolate and also honey product versions with berries can be seen as product innovations (Schumpeter 1934)

Then can conclude that product quality and innovative receipts make the superior value over other honey products. Then I asked to owner of honey production company : " How and when this idea was created? "

Honey production company's owner told: *"No, business idea and recipes I had already in my mind before economic crises, I just could not realize it in that time."* It shows that crises have changed the customers' behaviour and they evaluate products differently than before economic crises.

5. Innovative products by its concept and innovative product variations creates success

Hill and Rothaermel are proposing theory that: "capability-enabled innovativeness and innovation facilitate adaptation to the environment and success on the markets". (see e.g., Hill & Rothaermel, 2003). This is true to some innovative products like innovative product honey with different berries. The product and business idea involves innovative approach, when honey is mixed with berries, which gives different tastes and flavours. The advantage over other honey products that even more raises the value in eye of customers is that products do not have additives. Nowadays nearly all products have additives, and people understand that it is unhealthy and harmful when such products are eaten every day, therefore food without additive substances, that in old times was considered as a just understandable norm, now has become as luxus food and it is extremely rare to find such kind in shops. Honey is one of these products, therefore it is also considered as valuable beside its nutrient features.

Some products are valuable and are particularly sold in crises conditions than before; some products opposite are sold less. Customers have more power than before economic crises, because before crises all had nearly double higher salaries and many products were bought because customers did not overanalyse where they spend money and in a way didn't evaluate so much what they buy. With fewer incomes people are more carefully evaluating where they spend their money and what they get back. Customer's values have changed in times of economic crises; this changed way of purchasing products and changed customer needs initiates creation of innovative products.

Reconfiguration of organization strategies and companies' ability to find out the value what company delivers to client in times of crises helps to overcome crises.

Important aspect that companies have understood is that people are valuing products differently. Incomes of family in households' plays important role of choosing what kind of products are needed to buy regularly and what products might wait. Bennett and Cooper nearly 30 years ago is explaining how marketing innovations is influencing customer demand

and their shift of perceived values, that could be very related to market during crises *"Marketing innovation emphasizes growth by shifting customer demand from elastic to more inelastic market segments through delivery of better value – actual and perceived by the customer"* (Benett and Cooper,1979;Hurley and Hult, 1998). Despite this fact that many products lost markets, there are some few products where the total amount of sold products was growing, because customers evaluate them by the value they give to them, like it happened with natural honey mixed with berries, product is not having additives.

Before crises there was bigger chance to sell any product because incomes were nearly double in families. Certain products simply are not bought because people can't afford them to buy and they don't consider them as valuable and needed when the value of money is high, when the work done for the same money has to be done double more than before crises to buy some certain products, if there is another cheaper and more ecological solution for example like honey instead of snuggler. Honey with berries is innovative product and added value and competitive advantage lies in fact that berries are not boiled and there is not added any additive substances or snuggler, it is ecological product.

Owner of honey production company answered to question how crises affected his business:"
"It has been positive changes in last years. Actually, personally my enterprise has just expanded and benefited from economic crises. I am selling much more products to shops and potential clients than I did before economic crises. Before it was very hard to sell honey in such amounts like it is now. I know that other fields have suffered, but honey production has just benefited from crises."

6. Technologies are fostering creation of innovative products

Technologies are serving and fostering creation of innovative incremental improves of products and processes (laboratory equipment and production equipment in clothes and car industry) mainly technologies are provided with the financial support of foreign headquarters companies support. State and government has not supported or provided with new technologies and equipment. Without financial support these companies might not be able to continue their performance in such level as they are doing now, when it is observed even slow growth and starts some stability period.

7. The reaction speed to market changes helps to keep advantage over competitors

The speed to react in right time to market change plays important role. Ability to adapt to environment in appropriate time and consistent manner plays important role. All inner organizational dynamic capabilities are activated in the way that all resources are oriented to fit with environmental change. Schumpeterian view points out that: "capabilities and routines contain firm's fundamental structure". Each company has its routines and daily performed operations that provide delivery of final product, but the fit between these routines and environment is describing to which extent firms have positive fit with environment. Literature is mentioning that firms are benefiting from dynamic capabilities and operational capabilities, and that: "*environment effects and moderates the need and use of these dynamic capabilities*" (Ambrosini, Bowman, & Collier, 2009; Eisenhardt & Martin, 2000; Zahra, Sapienza, & Davidsson, 2006).

This has been done by regular market analyzes and weekly meetings when top management takes decisions how they will organize their work and resources for that particular week until the next one week. Companies are more sensitive to the change of environment and market than it was before and the speed of reaction to environmental has been growing in companies that are leaders in industry, but the rate of adapted innovations is moderate, it depends on each industry separately and characteristics of enterprise – size, organizational structure, available finances, the professionalism of employees, inner work processes and work norms.

8. Organization structure and management style affects innovativeness

Organization structure and management leading style affects information flow and ability to respond to environment change by efficient use of all resources in right time, this is inner dynamic capability that inner resources are reorganized to achieve higher performance and competitiveness. This can be related to clothe production company, car building industry administration department and chocolate fabric. Companies which are taking decisions in integrated and elastic teamwork are more able to adjust to change and create new product versions or at list products with higher quality than that companies which has mechanic strictly planned structures. Clan structure can be related to clothes, car industry, chocolate fabric .Clan form (Quinn and Hall, 1983) puts main effort to be united team, and success in

company is defined in terms to customers and clients and satisfaction for organization members. (Hooijberg and Petrock, 1993). This is the structure of chocolate fabric, because they have exactly this goal to satisfy clients' needs and to have united team.

9. Sensitivity to customers' needs

Sensitivity to customers' needs has been mentioned by clothes designing and manufacturing company, company that manufactures of car metal surfaces, chocolate fabric, road building company and honey producing company. The sensitivity to customer needs makes companies to create products that satisfy clients' demands, and for company members company tries to provide better climate, where employees can achieve better result and develop themselves. The only difference from this sensitivity theory in my cases is that not always structure is flexible.– oriented and organic Zammuto and O'Connor (1992) expressed that usually Such organization can be often characterized with high differentiation and professionalism. Company that operates in car production industry is not flexible in lower level in manufacturing department; they should follow and obey the hierarchy in company. Chocolate fabric can be described as clan structure with more elastic approach, because respondent stressed that most valuable are suggestions from old technologists and they take it in consideration, when creating new versions for different customers.

Honey products also are produced and sold by customer demand. When I asked: "How does company keeps clients", answer was:

"Yes, all the time we think about new receipts of honey mix and more we produce what has been sold out. For example, Rimi shop chain is telling me, which product is going good and in common dialogs I get information what kind or products are needed to produce. We also try to invent new offers and then shops let me to know how they are selling." Communication and change of information plays important role between customers, suppliers and producers.

Organizations are more sensitive to environmental changes and market changes, they try to be as responsive as possible by organizing regular meetings and transforming all information in much faster ways inside company than it was before crises. Reaction and speed to adjust to market changes plays important role in cloth production enterprise, car metal surface production company, chocolate fabric and similar attitude was also in other companies that speed to react and inner organization to adapt to demand is very important:

"We are much sensitive to market changes, to clients demand and their wishes, we all the time follow the models that they order more often to understand tendencies and to know what is more demanded and what less., we have to predict and react more faster than before economic crises. We are much more, how to say..., more sensitive and faster in our reactions to clients wishes. We are more responsive and responsible in our decision, what to produce, we are evaluating more often situation what we are planning to produce and in what amounts, otherwise we will lose incomes and clients. Every week we evaluate and plan before starting production process". There is described is companies' inner dynamic capability to adjust and reorganize inner resources to demand in appropriate speed. The company is sensitive to changes and tries to respond in appropriate speed. Lengnick Hall in 1992 explained that : "Speed relates to timing in which firm is adapting innovation and speed shows firms ability to response fast and quickly in comparison with competitors". (Lengnick-Hall, 1992).

The number of adapted and created clothes designs has not been named, but from answer that they evaluate each week, it also shows that they all the time adjust some minor improvements in designs that more satisfies clients. One of main concerns is continuously to improve designs according to demand. (Lengnick-Hall, 1992.).

Inner dynamic capabilities are main source for incremental innovations for existing products. Mainly in my interview cases incremental innovations are created, radical innovations appears over longer time.

10. Innovation variation and quantity depends from industry

There are fields that are connected with state politics like road building industry in my research case, and it hinders innovation. In different countries these rules and industries might differ.

Laboratory leader from road building company explained: *"Yes we did testing, but just in regular testing to meet minimum certification requirements, general tests. In road construction and building process there was not much innovative activities. Very minor improvements or innovations are possible to make, nearly nothing, because if builder wants to build more qualitative roads from new road materials it costs much and then it is not worth to perform works, also is hard to take any tenders. All what is qualitative costs more and that*

builders can't afford. All decisions are made without research, without quality, because then we simply will not be able to earn nothing!"

Ability to innovate is limited from the nature of product or other outer aspects that might hinder innovations. In road building company state politics and state tenders how they are organized, lack of finances does not let builders to create novel innovation projects or use more expensive materials. Financial limitations from point of providing service or accomplish final product, especially it is important in building industry and road building industry.

In car building industry where technical parameters should be followed, is harder to invent changes than it is in food industries where receipts can be improved easier. To question: *"Does there is some space for innovations or some novel things, which company could add during production process?"* respondent answered: *"not really, we can't change parameters, we have to produce precise montage details how clients are demanding, but once this parameters or specifications is received our quality department together with production and logistic department things how to fulfill quality demands and client wishes. We can't invent anything much new; just from point of quality improve final result."*

11. Fitness with environment moderates firms' ability to adapt innovations

All respondents told that they try create changes that fit with customer demands. The ability to fit with environment is especially important in crises environment. Due to environment is influencing properties and behavior of firms (Ackoff, 1981), then open environment system plays important role to firms' competitiveness and innovativeness. (F.Damanpour and S.Gopalakrishnan, 1998, page 11). That is reached by using organizational dynamic capabilities by integrated communication, meetings, common problem solving approach are found new solutions and better product versions that are economically most viable solution. These process happens all the time and it fits with Leonard – Barton statement that :*"The innovation fitness to environment, that is created by valuable dynamic changes in organizational level, it cannot be taken as absolute state, because after some longer period of time it might not be actual and not fit anymore with environment."* (Leonard-Barton, 1992) Dynamic capabilities are very much connected with creation of innovation because through renewing, extending and modifying existing resources are created new innovative products

that more fit with demand in that particular time and in such way they also promote fitness with environment

Main finding is that inner dynamic capabilities are used to creating incremental improvements and variations of existing products in times of crises. Improved products by some characteristics and parameters are product innovations by Schumpeter classification. (Schumpeter, 1934).

Researchers are agreed that :*"Dynamic capabilities pompously initiate change and renewing of existing tangible and intangible resources in way that new opportunities are realized in practice by creating new products that better fit with environment."* Makkonen,2014; see Eisenhardt & Martin, 2000; Helfat et al., 2007; Winter, 2003; Zahra et al., 2006; Zollo & Winter, 2002). Renewing capabilities are more related to refreshing nature of source, for example, creation of new product lines. (Ambrosini, 2009). Adaption to environment can be seen as exploration process and successful management of current business demand can be seen also as exploitation operations, (H. Makkonen, page 2708, 2014) Doty is stating basic theory regarding organizational effectiveness and firms structure: *"organizational effectiveness is high for firms, where environmental change fits the structure and innovation adoption characteristic portrayed."* (Doty, 1993). From my cases this can more fit to chocolate fabric. In case of chocolate fabric and clothes productions all the time are created new models or *"new product lines that are refreshing the nature of basic products"*. These small product variations that fit with environment still is considered as real innovation if it has even minor quality improvements (Schumpeter 1939 and 1989, p. 181) The firms changes through dynamic capabilities to adapt to environment. Dynamic capabilities refer to organizational change, which fosters and promotes innovation and as a result gives better evolutionary fitness. (Makkonen, page 2708, 2014).

By Damanpour and Gopalakrishnan four environmental adaption model can be also categorized my research cases. (F. Damanpour, S. Gopalakrishnan 1998)

Innovative honey mixtures with berries can be categorized in environmental condition EC3, where environmental stability is unstable and predictability is high. The rate of adaption of innovations in this condition is high and speed is moderate depending on demand. In the same environmental condition can be categorized chocolate fabric and clothes manufacturing company, they have organic clan structure and they are also able to adapt innovations in moderate speed.(F. Damanpour, S. Gopalakrishnan 1998)

Car metal surfaces manufacturer can be categorized in environmental condition EC1, where innovation adaption by rate and speed is slow. Road building company relates to environmental condition EC2 with low rate and fast speed of adaption, because of limitations the number of innovations is less, but once some innovation receives permission from management to be realized in practice, it will be fast implemented, because all knowledge, technology and human resources with needed skills company is having. Innovations can be implemented fast.

Unfortunately none of my research cases does not match in four environmental condition EC4 by F Damanpour environmental theory, where speed and rate is unpredictable and inner culture is to promote innovative solutions, because my interviewed companies are small and medium side and are not so large leading leaders in industries. Usually such companies are telecommunication companies, leading computer manufacturing companies, research oriented biogenetic research companies and pharmaceutical firms. (F. Damanpour, S. Gopalakrishnan 1998) It could be case of Apple company, Dell computer company or other large and well known pharmacy companies. This condition could be specially expressed to more dynamic environment in particular named industries and more related to time before economic crises.

6. Conclusions

Economic crises makes people to evaluate what they are willing to buy and what products are worth to buy with incomes they get, in a way there is more consideration where money has been spend. Due to this circumstances without will people are having bigger purchasing power than before crises and demand is allocated toward more quality and valuable products than it was before crisis. Companies need to make sure that products they manufacture or offer for customers will meet expectations and values in crises situation, this process relates to firms adaption to crises environment.

Products with higher delivered value and innovative products like honey with berries are having competitive advantage in times of crises because they are more evaluated from customers.

Adaption to environment can be seen as exploration process. Successful management of current business demand can be seen also as exploitation operations, (H. Makkonen, , 2014, page 2708) All companies are trying to adapt to crises environment and more effectively use management skills, therefore managers with ability to find solutions in crises and stress situation are especially searched by their field of expertise as it happened in company that manufactures and assembles automobiles metal surfaces.

After conducting interviews with five different companies, main finding is that: Dynamic capabilities positively affect firm's ability to generate innovative products. Dynamic capabilities plays big role when financial resources are less. The lack of finances is solved by reorganizing ownership and selling some shares of company to foreign companies. Many researchers are naming following dimensions of dynamic capabilities: "*sensing and seizing, learning and knowledge creation, integration, reconfiguration and leveraging.*" (H.Makkonen,2014; Ambrosini et al., 2009; Barreto, 2010; Bowman & Ambrosini, 2003; Teece, 2007), then in my research also can see that ability to sense and see market opportunities and using existing knowledge for creation of new product variations plays important role to lead to recovery and growth of companies.

As a result of crises, external dynamic capabilities (further -DC) also plays important role, for example all companies expressed that they are adjusting production to sell products to Europe market and are searching for new markets, which is an external DC, meaning firms capacity and ability to switch from domestic to foreign markets. Recently growing companies have tendency to switch all processes to global market. Opening new markets is one from five

innovation combinations or types by Schumpeterian innovation definition (Schumpeter, 1934).

Companies have lost their previous clients and possible customer segments and now in time of crises again companies try to grow and find potential customers with even more improved performance, faster dynamic response and higher quality products in different variations. This is the case of clothes manufacturing, chocolate fabric and honey products. Before starting and opening business in some other countries need to meet customers' needs and values and perceived norms of what is fashionable and valuable.

Dynamic capabilities are the main force that generates innovative incremental changes in existing products. Clothes production companies regularly are organized meetings and created new designs of clothes based on clients' wishes and most frequent purchased clothes designs from catalogues. Chocolate fabric also is adjusting and creating incremental innovations based on existing knowledge and previous product creation technologies, that new variations can satisfy customer needs. Are used organizational capabilities by organizing regular meetings. Renewing capabilities are having refreshing nature of source, for example, create new product lines, and development of these capabilities lies in reconfiguration and learning. (Ambrosini, 2009). All products are trying to create fresh variations in my research cases, or at least higher quality products like it is in car surface production company and road building company. Companies are having inner learning processes that are aimed to educate especially new employees. These all are incremental innovations that are characterized with high value and are oriented to satisfy market demand. In companies that are having innovative incremental changes and are even growing, dynamic capabilities are playing main role in companies' performance.

Companies are activating inner organizational capabilities to reach more effective outcome with available resources in timely manner. In company that produces metal surfaces by customers' technical parameters solutions are found in integrated approach when quality department works together with logistic and production department. They mentioned that it has become more important to transfer important information in right time. It means that also speed of reaction and ability to create innovative solutions is important parameter in time of economic crises.

Clothes production companies' respondent told that difference in performance from time before beginning of economic crises is in "sensitivity how company reacts to changes" of

market demand. The speed and sensitivity to react to environmental changes plays important role to companies fit with environment and it fosters creation of some small improvements and novelties. Chocolate fabric respondent, clothes production respondent, car metal marts manufacturing company and honey company manager approved that speed and inner ability to adjust product improvements to demand has become extremely important. Lengnick Hall in 1992 explained that speed importance in time of economic crises: "Speed relates to timing in which firm is adapting innovation and speed shows firms ability to response fast and quickly in comparison with competitors."(Lengnick-Hall, 1992). Dynamic capabilities are associated with speed and it indicates growing importance of dynamic capabilities in time of crises. (Lengnick-Hall, 1992). Companies are adapting innovations in appropriate speed by organizing regular meeting. Evidence of an internal DC are mentioned, that management regularly at list one time per week organizes common meeting, when all week plans are discussed that companies performance can match with environmental change for that particular week.

Communication in firms' fosters faster reorganization process and innovation adaption process. By meetings and frequent inner change of information happens more efficient use of existing resources and resource transformation. Efficiency to change and deliver information has been mentioned as one of priorities in inner performance in car metal surface manufacturing company. In this case company can compete just by precise and qualitative products, because technical characteristics given by clients are not letting to create any other kind of innovations. In this case more qualitative product or better quality of product also is considered as innovation type by Schumpeterian innovation definition, it is "*product innovation*" (Schumpeter, 1934).

Foreign investments in companies and reorganizing ownership is one way how companies are finding solutions to limited financial resources. Companies are more globally oriented by investor management team guidance or head quarter company suggestions. Financial support and organizational unity with foreign shareholders help to find potential business partners in foreign countries and it plays positive impact on companies' ability to overcome crises negative affect and create also innovative competitive products. In such way is provided work to employees and opened new markets as well. Incremental innovations in product in longer time shape new product variations, which satisfy also global market.

By effective exploiting all resources and technologies and in parallel exploring of market environment changes are created new innovative product versions. This is the case of

clothes manufacturing, company, chocolate fabric and cars metal surface production company, only road building industry is less able to create innovations due to state political restricted tenders. Ability to innovate depends of product or industry type. Some companies in particular industries can afford to create more variations than others companies that are creating more precise and technically reglamented products and services.

Elastic and clan structure help better to create innovative products in firms are such firms are more able adapt innovations. Mechanic and complex structures inhibits communication between levels and creation of innovation. (Hull and Hage,1982).

6.1. Further research

My research might draw picture and broaden understanding of crises impact on innovation, but it could be suggested that further research might be done in other countries as well, because it is not possible to put equality sign and generalize that equally similarly in the same way are affected other countries due to cultural, historical and economic situation differences, even though some findings could refer to other countries similarly. Many countries felt the same negative effect from recent economic crises and entrepreneurship has suffered a lot from crises.

In my qualitative research with semi structured interviews there has been gained results just from five different companies within different product fields, but would be recommended to broaden and continue research by interviewing companies also from other industries, then it would give more sure results that could be generalized without any doubts. Might be needed also to interview and research industries where speed and rate to innovate is unpredictable, that would match to environmental condition EC4 by Damanpour and Gopalakrishnan structural theory of environment conditions. (Damanpour F, Gopalakrishnan 1998) These companies are larger and usually are industry leaders, like leading computer developing companies, pharmacy and bioengineering companies. Such companies are not included in this research.

As my thesis come to conclusion that ability to innovate is different in different industries, further research could be done to name the more creative and innovative industries in contrast with that industries where ability to innovate is limited by some outer factors and technical parameters, that is related to that particular field.

As there are some products which are having bigger perceived value in eyes of customers, they did not felt negative crises effect, but opposite - crises situation has opened new market opportunities to sell in larger volumes - chocolate and honey products. It has been mentioned also "caramels and some other products", but further research might be needed which products are benefiting from crises environment that customers prefer more in crises situation than it was before crises affect. The reason might be that there is not just high delivered quality of particular products but some other factors that stimulates customers to favor some particular product groups in time of economical crises.

Might be also interesting to make quantitative research and explore different companies' characteristics that correlate with dynamic capabilities and ability to innovate.

References

- Abrahamson, E., (1991.) Managerial fads and fashions: the diffusion and rejection of innovations. *Acad. Manage. Rev.* 16, 586–612.
- Ackoff, R.L., (1981). *Creating the Corporate Future*. Wiley, New York.
- Ambrosini, V., Bowman, C., & Collier, N. (2009). Dynamic capabilities: An exploration of how firms renew their resource base. *British Journal of Management*, 20, 9–24.
- Archibugi D, Filippetti A., (2011) Is the economic crisis impairing convergence in innovation performance across Europe?, *Journal of common market studies =JCMS* 2011, volume 49, number 6., pp 1153-1182.
- Arrow, K. J. (1984), "Statistical Requirements for Greek Economic Planning;" *Collected Papers of Kenneth J. Arrow*, vol. 4: *The Economics of Information*, Oxford: Blackwell.
- Griliches, Z. (1987), "Comment;" Washington, DC: Brookings Papers on Economic Activity.
- Augusto, M., & Coelho, F. (2009). Market orientation and new-to-the-world products: Exploring the moderating effects of innovativeness, competitive strength and environmental forces. *Industrial Marketing Management*, 38, 94–108.
- Baker, M.J., McTavish, R., (1976). *Product Policy and Management*. Macmillan, New York.
- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99–120.
- Barney, J. (1997). *Gaining and sustaining competitive advantage*. Reading, MA: Addison-Wesley.
- Barney, J. (2000). Firm resources and sustained competitive advantage. *Advances in Strategic Management*, 17, 203–227.
- Barreto, I. (2010). Dynamic capabilities: A review of past research and an agenda for the future. *Journal of Management*, 36(1), 256–280.
- Bennett, R. C., & Cooper, R. G. (1979). Beyond the marketing concept. *Business Horizons*, 22(3), 76–83.
- Bennett, R. C., & Cooper, R. G. (1981). The misuse of marketing: An American tragedy. *Business Horizons*, 24(6), 51–61.
- Business Inkubators, 2013, online portal- <http://www.naudabiznesam.lv/atbalsts-jaunajiem-uznemejiem/biznesa-inkubatori/> (looked 16.05.2014)

- Champion, D. (1999, March/April). The Asian crisis: The price of under-management. *Harvard Business Review*, 77, 14–15.
- Chesbrough, H. W. (2003). *Open innovation the new imperative for creating and profiting from technology..* Boston (MA): Harvard Business School Press.
- Child, J. (1972). Organizational structure, environment and performance: The role of strategic choice. *Sociology*, 6(1), 1–22.
- Cooper, R.G., Kleinchmidt, E.J., (1990). New product success factors: a comparison of ‘kills’ versus successes and failures. *R & D Manage.* 20, 47–63.
- Daft, R.L., (1978.) A dual-core model of organizational innovation. *Acad. Manage. J.* 21, 193–210.
- Daft, R.L., (1982). Bureaucratic versus non-bureaucratic structure and the process of innovation and change. In: Bacharach, S.B. _Ed., *Research in the Sociology of Organizations*, vol. 1, JAI Press, Greenwich, CT, pp.129–166.
- Damanpour, F. (1992). Organizational size and innovation. *Organizational Studies*, 13(3), 375–402.
- Damanpour, F., (1988). Innovation types, radicalness and the adoption process. *Commun. Res.* 15, 545–567.
- Damanpour, F., (1991). Organizational innovation: a meta-analysis of effects of determinants and moderators. *Acad. Manage. J.* 34, 555–590.
- Damanpour, F., Evan, W.M., (1984). Organizational innovation and performance: the problem of organizational lag. *Adm. Sci. Q.* 29, 392–409.
- Damanpour, F., Gopalakrishnan, S., (1998). Theories of organizational structure and innovation adoption: the role of environmental change. *Journal of Engineering and Technology Management JET- M*, 15. ELSEVIER Science B.V., 1-24.
- Danneels, E. (2002). The dynamics of product innovation and firm competences. *Strategic Management Journal*, 23(12), 1095–1121.
- Danneels, E. (2002). The dynamics of product innovation and firm competences. *Strategic Management Journal*, 23(12), 1095–1121.
- Day, G. S. (1994). The capabilities of market driven organizations. *Journal of Marketing*, 58(4), 37–52.
- Deshpandé, R., & Farley, J. U. (2004). Market orientation, innovativeness and organizational Culture: Thai firms adapt to the Asian economic crisis. January: *Asian Journal of Marketing* 5–19.

- Deshpandé, R., Farley, J. U., & Webster, F. E., Jr. (1993, January). Corporate culture, customer orientation and innovativeness in Japanese firms: A quadrad analysis. *Journal of Marketing*, 57, 23–37.
- Dess, G.G., Beard, D.W., (1984). Dimensions of organizational environment. *Adm. Sci. Q.* 29, 52–73.
- Doty, D.H., Glick, W.H., Huber, G.P., (1993). Fit, equifinality and organizational effectiveness: a test of two configurational theories. *Acad. Manage. J.* 36, 1196–1250.
- Drejer, I., (2004). Identifying innovation in surveys of services: a Schumpeterian perspective. *Research Policy* 33., p. 551- 562.
- Duncan, R. (1976). The ambidextrous organization: Designing dual structures for innovation. In R.H. Killman, L. R. Pondy, & D. Slevin (Eds.), *The management of organization*, 1.(pp. 167–188) New York: North Holland.
- Eisenhardt, K. M., & Graebner, M. E. (2007). Theory building from cases: Opportunities and challenges. *Academy of Management Journal*, 50(1), 25–32.
- Eisenhardt, K. M., & Martin, J. A. (2000). Dynamic capabilities: What are they? *Strategic Management Journal*, 21(10/11, Special Issue: The Evolution of Firm Capabilities), 1105–1121.
- EUROSTAT. Published by: OECD Publishing.
- Fagerberg, J. (2003). Schumpeter and the revival of evolutionary economics: An appraisal of the literature. *Journal of Evolutionary Economics*, 13(2), 125.
- Fagerberg, J. (2005). Introduction—A guide to the literature. In J. Fagerberg, D. C. Mowery, & R. R. Nelson (Eds.), *The Oxford handbook of innovation* (pp. 1–23). Oxford: Oxford University Press.
- Frost, P.J., Egri, C.P., (1991). The political process of innovation. In: Cummings, L.L., Staw, B.M. _Eds., *Research in Organizational Behavior*, Vol. 13, JAI Press, Greenwich, CT, pp. 229–295.
- Goad, G. P. (1999, May). Playing by new rules. *Far Eastern Economic Review*, 162, 38–40.
- Hage, J., (1980). *Theories of organizations*. Wiley, New York.
- Hamel, G. (2000). *Leading the revolution*. Boston, MA: Harvard Business School Press.
- Han, J. K., Kim, N., & Srivastava, R. (1998). Market orientation and organizational performance: Is innovation a missing link? *Journal of Marketing*, 62(4), 30–45.
- Hauser, J., Tellis, G. J., & Griffin, A. (2006). Research on innovation: A review and agenda for marketing science. *Marketing Science*, 25(6), 687–717.

- Helfat, C. E., & Peteraf, M. A. (2003). The dynamic resource-based view: Capability lifecycles. *Strategic Management Journal*, 24(10), 997.
- Helfat, C. E., Finkelstein, S., Mitchell, W., Peteraf, M., Singh, H., Teece, D., et al. (2007). *Dynamic capabilities: Understanding strategic change in organizations* (1st ed.). Wiley-Blackwell.
- Henderson, R.M., Clark, K.B., (1990). Architectural innovation: the reconfiguration of existing product technologies and the failure of established innovation. *Adm. Sci. Q.* 35, 9–30.
- Hill, C. W. L., & Rothaermel, F. T. (2003). The performance of incumbent firms in the face of radical technological innovation. *The Academy of Management Review*, 28(2), 257–274.
- Hodgson, G. (1998). Evolutionary and competence-based theories of the firm. *Journal of Economic Studies*, 25(1), 25–56.
- Hooijberg, R., Petrock, F., (1993). On cultural change: using competing values framework to help leaders execute a transformational strategy. *Hum. Resour. Manage.* 32 _1., 29–50.
- Hoshyar, M., (2011)., *Dynamic capabilities in times of crises*, Amsterdam Business School.
- Hull, F., Hage, J., (1982). Organizing for innovation: beyond Burns and Stalker's organic type. *Sociology* 16, 564–577.
- Hurley, R. F., & Hult, T. M. (1998). Innovation, market orientation, and organizational learning: An integration and empirical examination. *Journal of Marketing*, 62(3), 42–54.
- Innovation Union scoreboard, 2014,
http://ec.europa.eu/enterprise/policies/innovation/policy/innovation-scoreboard/index_en.htm (looked 10.04.2014)
- Jaworski, B. J., & Kohli, K. A. (1993). Market orientation: Antecedents and consequences. *Journal of Marketing*, 57(3), 53–70.
- Jaworski, B., & Kohli, A. (1996). Market orientation: Review, refinement and roadmap. *Journal of Market Focused Management*, 1(2), 119–135.
- Johannessen, J. -A., Olsen, B., & Lumpkin, G. T. (2001). Innovation as newness: What is new, how new and new to whom? *European Journal of Innovation Management*, 4(1), 20–31.

- Jurkovich, R., (1974). The core typology of organizational environment. *Adm. Sci. Q.* 19, 380–394.
- Kessler, E.H., Chakrabarti, A.K., (1996). Innovation speed: a conceptual model of context, antecedents and outcomes. *Acad. Manage. Rev.* 21, 1143–1191.
- Kimberly, J.R., Evanisko, M., (1981). Organizational innovation: the influence of individual, organizational and contextual factors on hospital adoption of technological and administrative innovations. *Acad. Manage. J.* 24, 689–713.
- Kline, S., and Rosenberg, N. (1986), "An Overview of Innovation," in R. Landau (ed.), *The Positive Sum Strategy: Harnessing Technology for Economic Growth*, Washington: National Academy Press, 275-306.
- Kline, S.J., Rosenberg, N., (1986). An overview of innovation. In: Landau, R., Rosenberg, N. (Eds.), *The Positive Sum Strategy*. National Academy Press, Washington, p. 275–305.
- Knight, K.E., (1967). A descriptive model of intra-firm innovation process. *J. Manage.* 41, 478–496.
- Kohli, A. K., & Jaworski, B. J. (1990). Market orientation: The construct, research propositions, and managerial implications. *Journal of Marketing*, 54(2), 1–18.
- Kohli, A. K., Jaworski, B. J., & Kumar, A. (1993). MARKOR: A measure of market orientation. *Journal of Marketing Research*, 30(4), 467–477.
- Kristilla Skrūzkalne, Swedbank economist, Diena online news portal 31.03.2014, article "Population cautious spending on goods and accesses", <http://www.delfi.lv/news/comment/comment/kristilla-skruzkalne-iedzivotaji-piesardzigaki-un-terini-precem-pieklust.d?id=44351273> ((looked on 16.05.2014))
- Laestadius, S. (2003), "Measuring Innovation in the Knowledge Economy," Paper presented to Pavitt Conference on Innovation, SPRU, Sussex, 13Nov 2003.
- Lawless, M.W., Anderson, P.C., (1996). Generational technological change: effects of innovation and local rivalry on performance. *Acad. Manage. J.* 39, 1185–1217.
- Lawrence, P. R., & Lorsch, J. W. (1967). *Organization and environment: Managing differentiation and integration*. Boston: Graduate School of Business Administration, Harvard University.
- Lengnick-Hall, C.A., (1992). Innovation and competitive advantage: what we know and what we need to learn. *J. Manage.* 18, 399–429.

- Leonard-Barton, D. (1992). Core capabilities and core rigidities: A paradox in managing new product development. *Strategic Management Journal*, 13(Special Issue: Strategy Process: Managing Corporate Self-Renewal), 111–125.
- Lettice, F., Tischida, M. Forstenlechner, I. (2014). *Journal of Business Research*, 67, 2693–2700.
- Lichtenthaler, U., & Lichtenthaler, E. (2009). A capability-based framework for open innovation: Complementing absorptive capacity. *Journal of Management Studies*, 46(8), 1315–1338.
- Lin, Z., & Carley, K. M. (1997). Organizational decision making in and error in a dynamic task environment. *Journal of Mathematical Sociology*, 22(2), 125–149.
- Lukas, B. A., & Ferrell, O. C. (2000). The effect of market orientation on product innovation. *Journal of the Academy of Marketing Science*, 28(2), 239–247.
- Makkonen, H., Pohjola, M., Olkkonen, R., Koponen, A. (2014). Dynamic capabilities and firm performance in a financial crisis. *Journal of Business Research*, 67, 2707–2719.
- March, J. G. (1991). Exploration and exploitation in organizational learning. *Organization Science*, 2(1), 71–87.
- Meistere Dana, 2009, *Kurzemes vards*, article "Innovation - the crisis and development", <http://www.liepajniekiem.lv/zinas/bizness/inovacijas-pret-krizi-un-par-attistibu-28085>
- Meyer, A.D., Goes, J.B., (1988). Organizational assimilation of innovations: a multilevel contextual analysis. *Acad. Manage. J.* 31, 897–923.
- Meyer, A.D., Tsui, A.S., Hinings, C.R., (1993). Guest co-editors' introduction: configurational approaches to organizational analysis. *Acad. Manage. J.* 36, 1175–1195.
- Mintzberg, H., (1979). *The structuring of organizations*. Prentice-Hall, Englewood Cliffs, NJ.
- Narver, J. C., & Slater, S. F. (1990). The effect of a market orientation on business profitability. *Journal of Marketing*, 54(4), 20–35.
- Nelson, R. R., & Winter, S. G. (1982). *An evolutionary theory of economic change*. Belknap Press.
- Newey, L. R., & Zahra, S. A. (2009). The evolving firm: How dynamic and operating capabilities interact to enable entrepreneurship. *British Journal of Management*, 20, 81–100.
- O'Connor, G. C., & Rice, M. P. (2001). Opportunity recognition and breakthrough innovation in large established firms. *California Management Review*, 43(2), 95–116.

- OECD (2005). The measurement of scientific and technological activities, Oslo manual, guidelines for collecting and interpreting innovation data, 3rd edition, OECD,
- OECD outlook (2012). Technology and Industry outlook 2012. Innovation in the crisis and beyond. <http://www.oecd.org/sti/sti-outlook-2012-chapter-1-innovation-in-the-crisis-and-beyond.pdf>, (looked at 14.05.2014.)
- OECD, World Bank, (2014) , *OECD ESTIMATES OF R&D EXPENDITURE GROWTH IN 2012*, <http://www.oecd.org/sti/msti.htm> (looked 18.05.2014)
- OECD. (2005). Oslo manual: Guidelines for collecting and interpreting innovation data, 3rd edition Paris: OECD.
- Paunov Caroline, (2012). The global crisis and firms investment in innovation, Paris, France, Research Policy 41, 24-35.
- Pierce, J.L., Delbecq, A.L.,(1977). Organizational structure, individual attitudes and innovation. Acad. Manage.Rev. 2, 26–37.
- Poole, M.S., Van de Ven, A.H.,(1989). Toward a general theory of innovation processes. In: Van de Ven, A.H., Angle, H.L., Poole, M.S. _Eds., Research on the Management of Innovation, Harper & Row, New York.
- Quinn, R.E., Hall, R.H., (1983). Environments, organizations and policy makers: toward an integrative framework. In: Hall, R.H., Quinn, R.E. _Eds., Organizational Theory and Public Policy, Sage Publications, Beverly Hills, CA.
- Quinn, R.E.,(1988). Beyond rational management: Mastering the paradoxes and competing demands of high performance. Jossey-Bass, San Francisco.
- Raisch, S., & Birkinshaw, J. (2008). Organizational ambidexterity: Antecedents, outcomes, and moderators. Journal of Management, 34(3), 375–409.
- Rogers, E.M.,(1983). Diffusion of Innovations. Free Press, New York.
- Rosenberg, N. (1976), *Perspectives on Technology*, Cambridge: Cambridge University Press. - (1982), *Inside the BlackBox: Technology and Economics*, Cambridge: Cambridge University Press.
- Rothwell, R., Robertson, A.B., (1973). The role of communications in technological innovations. Res. Policy 2, 204–225.
- Ruekert, R. W. (1992, August). Developing a market orientation: An organizational strategy perspective. International Journal of Marketing, 9, 225–245.

- Ruekert, R. W., & Walker, O. C., Jr. (1987, January). Marketing's interaction with other functional units: A conceptual framework and empirical evidence. *Journal of Marketing*, 51, 1–19.
- SBA facts sheet 2013, Europe Commission, Enterprise and Industry Latvia,
http://ec.europa.eu/enterprise/policies/sme/facts-figures-analysis/performance-review/files/countries-sheets/2013/latvia_lv.pdf (looked on 16.05.2014)
- Schumpeter, J. A. (1934). In R. Opie (Ed.), *The theory of economic development: An inquiry into profits, capital, credit, interest, and the business cycle*. Cambridge, Mass: Harvard University Press.
- Schumpeter, J. A. (1950). *Capitalism, socialism and democracy*, 3rd Edition New York: Harper and Row.
- Schumpeter, J.A., (1912/2002). *The Economy as a Whole*, English translation of *Das Gesamtbild der Volkswirtschaft*. In: Schumpeter, J.A. (Ed.), *Theorie der wirtschaftlichen Entwicklung*, printed in *Industry and Innovation*, vol. 9, Chapter 7, p. 93–145.
- Schumpeter, J.A., (1934). *The Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest and the Business Cycle*. Harvard University Press, Cambridge, MA.
- Schumpeter, J.A., (1939/1989). *Business Cycles: a Theoretical, Historical and Statistical Analysis of the Capitalist Process* (abridged version). Porcupine Press, Philadelphia.
- Schumpeter, J.A., (1942). *Capitalism, Socialism and Democracy*. Harper, New York.
- Scott, W.R., (1992). *Organizations: Rational, natural and open systems*, Prentice-Hall, Englewood Cliffs, NJ.
- Slater, S. F., & Narver, J. (1994). Does competitive environment moderate the market orientation performance relationship? *Journal of Marketing*, 58(1), 46–55.
- Smith Keith, (2005). *Measuring innovation*. In: *The Oxford Handbook of Innovation*. Oxford University Press, New York, US, chapter 6, 148-177. ISBN 0 19 926455 4
- Subramanian, A., & Nilakanta, S. (1996). Organizational innovativeness: Exploring the relationship between organizational determinants of innovation, types of innovations, and measures of organizational performance. *Omega International Journal of Management Science*, 24(6), 631–647.
- Teece, D. J. (1986). Profiting from technological innovation: Implications for integration, collaboration, licensing and public policy. *Research Policy*, 15(6), 285–305.

- Teece, D. J. (2007). Explicating dynamic capabilities: The nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal*, 28(13), 1319–1350.
- Teece, D. J., & Pisano, G. (1994). The dynamic capabilities of firms: An introduction. *Industrial and Corporate Change*, 3(3), 537–556.
- Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509–533.
- Thompson, J. D. (1967). *Organizations in action*. New York: McGraw-Hill.
- Van de Ven, A.H., Angle, H.L., Poole, M.S., (1989). *Research on the Management of Innovation*. Harper & Row, New York.
- Van de Ven, A.H., Rogers, E.M., (1988). Innovations and organizations—critical perspectives. *Commun. Res.* 15, 632–651.
- Verona, G., & Ravasi, D. (2003). Unbundling dynamic capabilities: An exploratory study of continuous product innovation. *Industrial and Corporate Change*, 12(3), 577–606.
- Vikash Naidoo (2010). Firm survival through a crisis: The influence of market orientation, marketing innovation and business strategy. *Industrial Marketing Management* 39, 1311 – 1320.
- Winter, S. G. (2000). The satisficing principle in capability learning. *Strategic Management Journal*, 21(10/11, Special Issue: The Evolution of Firm Capabilities), 981–996.
- Winter, S. G. (2003). Understanding dynamic capabilities. *Strategic Management Journal*, 24(10, Special Issue: Why Is There a Resource-Based View? Toward a Theory of Competitive Heterogeneity), 991–995.
- Winter, S. G. (2006). Toward a neo-Schumpeterian theory of the firm. *Industrial and Corporate Change*, 15(1), 125.
- Wolfe, R.A., 1994. Organizational innovation: review, critique and suggested research directions. *J. Manage. Studies* 31, 405–431.
- Yin, R. (2009). *Case Study Research: Design and Methods*. California: SAGE Publications
- Yin, R. K. (2003). *Case study research. Design and methods* (3rd ed.). Thousand Oaks: Sage.
- Zahra, S. A., & George, G. (2002). Absorptive capacity: A review, reconceptualization, and extension. *Academy of Management Review*, 27(2), 185–203.
- Zahra, S. A., Sapienza, H. J., & Davidsson, P. (2006). Entrepreneurship and dynamic capabilities: A review, model and research agenda. *Journal of Management Studies*, 43(4), 917–955.

- Zahra, S.A., Covin, J.G., (1994). The financial implications of fit between competitive strategy and innovation types and sources. *J. High Technol. Manage. Res.* 5, 183–211.
- Zaltman, G., Duncan, R., Holbek, J., (1973). *Innovations and organizations*. Wiley, New York.
- Zammuto, H.F., Krakower, J.Y., (1991). Quantitative and qualitative studies of organizational culture. *Res. Organizational Change Dev.* 5, 83–114.
- Zammuto, H.F., O'Connor, E.J., (1992.) Gaining advanced manufacturing technologies' benefits: the roles of organizational design and culture. *Acad. Manage. Rev.* 17, 701–728.
- Zollo, M., & Winter, S. G. (2002). Deliberate learning and the evolution of dynamic capabilities. *Organization Science*, 13(3, Knowledge, Knowing, and Organizations), 339–351.

Appendix

Constructed questions before conducting interviews

- 1 Can you tell me a little about your company? When it was founded, how many employees you have, and what are the company's main products? Which markets you do You sell products ? (introduction question)
- 2 How does the financial crisis has affected your business and innovative activities in your company? In what way and how? Can you give examples? I am especially interested in how the financial crisis has affected the business of innovation activities. (Innovation oriented question)
3. How happens decision making process in your company, has there something changed in company management and organizational performance in times of economic crises? (Dynamic capabilities oriented question)
4. What is particularly important to reach higher performance, what has changed in company in times of crises? (Dynamic capabilities, quality and performance questions)
- 5 Does the economic crisis gave some new business opportunities for your company? If yes, in which ways ? (Market searching and competitive advantage related question.)
6. What resources play a key role in creating new products, how happens improvement initiation process to create new versions? (Dynamic capabilities oriented question)
7. Which resource has the greatest power in decision making and how these resources have changed the role in the times of financial crisis? -Knowledge; Technology; Finances for innovation and the development of the research process;- Lack of trained and experienced human resources ,- Government support; Laws and regulations , or other aspects ? (Dynamic capabilities oriented question)
8. What kind of improvements are more - radical or incremental improvements, how often such improvements are created and how they are appearing in company? (Innovation oriented question)
9. What is the company's core strength and strategic lines to keep efficiency and keep the market in these economic crises times? Whether it has changed over time as a result of the financial crisis? Could you tell some examples? (Strategy and market oriented question)

- 10 How would you describe the structure of the company, does the structure promotes innovation? (Structure affect ability to innovate, therefore innovation related question)
11. Can you predict economic changes in circumstances in country and how you manage to adapt to the new changes? (Adaption to environmental change)

Sub - questions

1. How are created final product and could You describe all companies production process
2. Who is taking the decisions in company? How company is deciding to approve some product version or some solution instead of other, does it has been performed some analyze before it?
3. Does economic crises conditions affected company innovation processes in last 5 years?
4. Does the lack of finances stopped to develop new versions or completely radically new products or services in your company?
5. Does Your Company had some improved versions of the same product that bring extra incomes or raised effectiveness inside company, compared to old product version?
6. Do there are still being discovered and improved services and goods in last years or not? In what way it is less and why?
7. How big role plays technologies in providing better quality products?
8. How do you evaluate competency of employees, does they contribute in production process?
9. How does company raise the competency of employees, it is hard to find appropriate people with needed skills in time of crises? Does there are some , do You organize some inner learning

Transcribed interviews

Interview with administration person

Company produces car metal assembly housings.

Me: "Hello, my name is Elizabete Dombrovska and I am making research how the economic crises have affected innovation and entrepreneurship in country. Could you reply to some questions?"

Respondent: "yes, I can tell about enterprise as much as I know."

Me: "How does the economic crisis affected enterprise?"

Respondent: "we have tendency to grow, we produce metal assembly housings for different car models, as we receive offer, we start to produce by required measurements and drawings and then we transport it for clients, they continue to work it out and adjust. This is not final product; it is just part of the car and half product. A lot of production is for foreign customers. Our owners are Germans."

Me: "How do you think it has been chosen Latvia as production country, because it is cheaper to produce than Germany or other countries?"

Respondent: "I don't know, probably."

Me: "Does there is some space for innovations or some novel things, which company could add during production process?"

Respondent: "not really, we can't change parameters, we have to produce precise montage details how clients are demanding, but once this parameters or specifications is received our quality department together with production and logistic department things how to fulfill quality demands and client wishes. We can't invent anything much new; just from point of quality improve final result."

Me: "Is not it created some small improvements or suggestions that can lead to some large essential novelties?"

Respondent: "we can have some qualitative minor improvements, but to have so large innovations with some new extraordinary solutions, such is appearing in very long time in this car metal corpus production industry. We have to follow client's descriptions and guidelines, because we are just part of car building process and all should match together also later on."

Me: "How many workers are employed in enterprise, does some of them was fired in last years?"

Respondent: "around 40 people are working in our company. We had to fire some, but now we are again some vacancies and we plan to accept more employees. "

Me: "Is it hard to find professional people in this industry with needed skills?"

Respondent: "No, it is not for montage works in production we are able to find persons, but recently we had situation that we were looking for production manager and it is hard to find such person with needed skills and experience, with logical thinking that could find solutions in times of crises and stress situations."

Me: "In such case, you were looking for person with specific knowledge in car building industry, which is specific knowledge and might be hard to find."

Respondent: "Not exactly in car building or montage industry, but at list with experience in any production industry, but as the factories has been historically ruined after soviet times, it is hard to find such person, such are not many."

Me: "To which countries metal car surfaces is sold?"

Respondent: "It is huge demand from Germany, Austria, Belgium and other countries also. Owner of the company is Germany, we sell just for abroad. Nothing is sold in Latvia."

Me: "How could you characterize the structure of the company, very organized hierarchical or more elastic and integrated?"

Respondent: "We have hierarchical structure, order, especially in montage department. We have order and respect in departments especially between managers and lower rank workers."

Me: "But isn't it situations when in producing department simple montage worker can say his opinion and then it is taken into consideration and might be implemented?"

Respondent: " so yes, montage worker can express his opinion, but more elastic and integrated relationships we have in upper management departments, they work very closely together and find solutions together."

Me: "What is different in the way how company works now in last years and before crises?"

Respondent: " Now all information is analyzed, sent and delivered in right time!
Communications are more active that all happens in right time and right way. We have regularly weekly meetings, but besides that departments work in close teamwork. Before it was not so intensive in a way, now it more important information rotation, because information needs to be delivered that production can happen with clients wishes. Today we have one more meeting in this moment."

Me: "What could you tell about inner trainings, are there organized inner trainings?"

Respondent: "yes, we have."

Me: "what about technologies, are they from Latvia or abroad?"

Respondent: "All technologies and production equipment comes from Germany, from abroad, precisely I can't name, but nothing comes from Latvia. From Latvia we have no investments or technologies."

Me: "How would you evaluate economic situation, can you predict it?"

Respondent: "It was hard times, but now we have tendency to grow and all goes on good side."

Me: "I think I have asked main questions, thank you for answers!"

Respondent: "please, not at all!"

Interview with Work clothes producing company

Me: "Hello, my name is Elizabete Dombrovska and I am studying innovation and entrepreneurship and making research about how economic crises effected innovation and business activities in Latvia, and as Your enterprise is mentioned in internet articles as one of examples that successfully over lived crises, I have some questions to You. Do you have time to speak with me?"

Me: "Am I talking with Iveta Zalite, the director of department for product development? Secretary advised to talk with you regarding my research topic."

Do you have some time to answers some questions?"

Respondent: "Well, I can try to answer these questions."

Me: "Particularly I am interested how crises influenced innovation activities. Please give me as match information as your experience and enterprise confidentiality allows, I am not looking for any secret information or any specific detailed business secret information."

Do the economic crises have some negative effect on company in last five years?"

Respondent: "We suffered from crises that affected Nordic countries. Yes, of course it had effect and we felt that market or sales became less and more narrow than it was before crises. We are producing work clothes that are sold in Nordic market, as our enterprise is daughter branch from Sweden mother main company. Enterprise in owned by Swedish person. As we sell to Nordic countries, we particularly mainly were affected by crises that affected Sweden, Denmark and Norway?"

Me: "But Sweden and other Nordic countries are economically stabile countries in comparison how economic crises touched Latvia. Could you explain how crises touched Nordic countries?"

Respondent: " Yes, it is stable, but still it was felt affect from Europe, because it is still impossible to divide country from wild economic processes and consequences was felt even in Nordic countries, because many business connections are connecting Nordic countries with Europe and other world. All in a way stopped compared with previous dynamics and business activities, it was reduced in business connections in different segments."

Me: "How many employees work at the moment in company? Does the company have to fire some employees in the years of economic crises and how does the number of employees is growing now?"

Respondent: "We have approximately 160 workers in our enterprise. Crises affected negatively enterprise, we had to reduce the number of workers and release some employees as a result of crises effect."

Me: "Don't you produce at list some part of clothes also for Latvia market?"

Respondent "No, we don't have even 1% of sales for Latvian market; all produced merchandise is sold just in Nordic countries. We plan to make market research in the nearest future and probably we will start to sell in Latvia, but until now we are not selling in local market. Marketing and research department is in Sweden, until now they make market research and tendencies where enterprise should tend to sell and what kind of products. Mainly we are modeling and producing designs by orders that we receive from them."

Me "What are your main clients, some large shop chains, or some other clients?"

Respondent: "Basically our clients are not large shop chains, but representatives from large companies. These persons are taking contacts with our headquarter in Sweden, they go and speak about order details and then we receive information from Sweden and we start to plan how we will produce model. We are having model creating department, that is creating first model with needed adjustments and we send this first draft to Sweden, as it is approved, is produced first prototype and after that is planned production process, ordered materials and started to produce in needed volume. We don't have storage for produced clothes; we have just raw material storage of materials. After creating clothes, they are shipped to client."

Me: "You, told that company lost clients, what do You mean by losing clients, because Your company still is having some sales and is able to find potential clients, does the clients are changed?"

Respondent: "Yes, because before crises we had, so called, let me to say it in Latvian - some niche or specific segment of clients which regularly come to us and they build relatively

large number, but now we have lost it and we are feeling this clients lose. It is harder to sell"

Me: "You are mentioning just working clothes, don't you produce are casual clothes as well?"

Respondent: "Yes, we mainly produce work safety clothes, but we plan to release also a line with clothes that can be used as in work so in free time besides work."

Me: "How do company keep competitive place in market and does innovation takes some role in it, or there are other aspects that keeps competitive advantage and helps to overcome crises negative effect?"

Respondent: " We basically try to adjust to customer demands and we try to adjust to potential changes in demand."

Me: "How do you can predict it?"

Respondent: "we are gathering information from last weeks which design models are ordered to produce more often and it shows which tendencies are actual and in which way we should adjust our next offered designs."

Me: "Could you describe how this process of new clothes creation happens?"

Respondent: "We have two ways of creating models for sale; one is through catalogue with already modulated sketches of working clothes, that are designed before and we offer for potential customers to choose which models they would prefer to be produced for them. These models are already worked out by our designers in Sweden. Second way of creating clothes are by common consultancy and designed especially from individual customer wished, in common dialog we draw and make first sketches of new designs for clients with their specific wishes, but of course, in such cases it costs match more than ordered from catalogues and then we need to speak very closely with customers about materials and potential prices of production, that it is favorable for both sides financially".

Me: "Does the company have more incremental or radical innovations?"

Respondent: "More innovative things are based on previous designs and experience, we have more incremental innovations."

Me: "Does there is some difference in the way how company were acting or creating added value and to maintain market position in comparison with times before economic crises?"

Respondent: " Yes, we are much sensitive to market changes, to clients demand and their wishes, we all the time follow the models that they order more often to understand tendencies and to know what is more demanded and what less..., we have to predict and react more faster than before economic crises. We are much more, how to say..., more sensitive and faster in our reactions to clients wishes. We are more responsive and responsible in our decision, what to produce, we are evaluating more often situation what we are planning to produce and in what amounts, otherwise we will lose incomes and clients. Every week we evaluate and plan before starting production process. "

Me: "So you want to tell, that you are more sensitive in evaluate market situation and making decisions how to adjust to client wishes?"

Respondent: "Yes and time of reaction also is important, meaning speed of reactions is much faster than before crises."

Me: "How often do you have such meetings to evaluate situation?"

Respondent: "We have it every week, yes, at list one time per week we evaluate tendencies and take decision what will be produced for the following week. We discuss in work process during production process some details as well."

Me: "Are you having also inner learning processes to teach employees"

Respondent: "yes, we have inner learning trainings, but many employees work long time and they have experience and knowledge?"

Me: "Still, could You say that there is some innovation aspect that helps to raise incomes besides dynamic processes, or clients like models that are already designed and they are more conservative or probably not?"

Respondent: " In Sweden and Denmark, I would say that our clients evaluate quality and classical values that we offer, but paradoxically is - that exactly in Latvian local market we have noticed and observed that there is demand to some novelty and innovative designs and tendencies. We are researching local market and plan to sell in Latvia."

Me: "What are the sources that initiate innovations or novelties? Could you say that government supports production process and helps to create some innovative products? Does there are some financial support or technologies that you get as a help from state? "

Respondent: "From Latvian state government we don't feel any support. All equipment and finances we get from Sweden, from our main headquarter. I would say, that main innovation resource is customer demand and their wishes, which we try to fulfill and satisfy.

Unfortunately from state we don't feel any support. Finances, technologies are from Sweden, but not from Latvia"

Me: "What would be enterprise situation now, if the owners of company would be Latvian actioners, could you overcome crises and imagine what would be different?"

Respondent: "Then it would be very sad situation, better not even to imagine what would be then...!"

Me: "Yes, I understand, mainly from financial point ..."

Respondent: " Yes."

Me: "Thank You very much for interview, I wish luck in the future. Your information will be valuable because I write my master thesis for Oslo University, which as we know, is one of the Nordic countries and it might be interesting material. Thank you very much!"

Interview with administrative representative of export department in the largest and oldest chocolate fabrics in Riga. It was founded in the 1870

Me: "Hello, my name is Elizabete Dombrovska and I am studying innovation and entrepreneurship and making research for master thesis about how economic crises effected innovation and business activities in Latvia? As company X is so bellowed and popular enterprise in Latvia, I would like also to hear how company owe lived economic crises years and especially how innovation activities were affected. Do you have time to speak with me?"

Respondent: " Well, I can try, but I am not the oldest worker here, I will try to uncover your questions as much as I know, because before I was working in another department. One person, who picks up usually this phone, went out, but I can try."

Me: "How long do you work in company?"

Respondent: " I work since 2011.year."

Me: "That is long enough, that is the year of economic crises, you still could remember and describe situation in last years."

Me: "How many employees company has?"

Respondent: "Totally around 700 employees are working in company"

Me: " How does the economic crises affected company?"

Respondent: "Economic crises create tendency to grow, we are oriented to export. Enterprise has reorganized and over valuated its goals and vision, it has changed. The strategy is changed. Our vision is tended to export and we have explained also this to our workers. We sell abroad and also produce for foreign."

Me: "But how does it happen, that in the years of economic crises enterprise turnover is growing, is there something valuable or some advantage?"

Respondent: "yes, but of course. We are the only one compared with many European sweet producers, who are having full chocolate processing process. We are nearly the only one in Europe who performs full chocolate creating process in factory from beans, not from powder or half produced chocolate products as it is done in other European factories. They

buy powder or half made components from other factories and then make chocolate, but we make all ourselves. Beans we transport direct from Gana, Africa and we start chocolate creating process from beginning until the end and that is the main reason why we have so high quality."

Me: "well, yes, now I understand better."

Me: "Has the financial crisis influenced innovative activities in your firm? In which ways and how? Can you give examples? Are there also some innovative products or new receipts created?"

Respondent: "We are producing products for foreign, that is reason why we also create some new receipts, we try to adjust our traditional sweet receipts to foreign client demand, their tastes and cultural values in eating habits."

Me: "For example, like in Germany they like marzipan, then most probably you use it more for Germany exported sweets, or some new candies with chocolate and marzipan together, is it?"

Respondent: "...yes, there are different receipts and solutions, sometimes we have to add one additive, sometimes more...."

Me: "Does it means that company creates something totally new, novel?"

Respondent: "The assortment has certainly grown, not always it is something totally new. Many sweets are based on old receipts, but it can have some new components and might be also that technological creation process might change little bit, but that is advising out technologists how to produce them better. There also some companies values and quality values and characteristics what we want to see in our products, besides some parameters what are demanding out export countries. Enterprise has its inner values and characteristics that we also want to keep and see."

Me: "Could you say, those in company are working experienced people, who help with ideas for novelty creations? I suppose, because enterprise is so old, it should have some very experienced workers, who can give valuable advises to create some new receipts or novelties."

Respondent: "yes, that is true, we have some very old workers, that has worked some 10 and more years, and they are the main force which initiates changes. They know the process and with their experience we can create new assortment. Some things we optimize, but some make totally new."

Me: "Is there also inner training?"

Respondent: "yes, we have, and we also explain to workers vision and targets of enterprise."

Me: "Can you compare how enterprise worked before crises and how it is now, what has changed?"

Respondent: "Before we were producing for Latvia, for local market, now we are more export tended, we produce for foreign markets. We are just expanding."

Me: "Does the process or technologies of chocolate creating have changed a lot also? In other enterprises workers have to work for two but receive the same money? Don't you have similar situation when the turnover is growing?"

Respondent: "Certainly the amount and number of novelties and new assortment has grown, and it makes more responsibilities for workers in comparison with times before crises. There are more responsibilities for one worker, there are also a lot of things to learn because we have more diverse products, but technologies or methods in big lines of chocolate creation we have the same, we have our traditional values and secrets what we keep."

Me: "Are there some products, what company does not produce anymore?"

Respondent: "Yes, enterprise regularly evaluates which products are sold better and which not, which brings profit and which not. Every year something changes."

Me: "Do you evaluate that innovations are bringing incomes and has helped to overcome crises or there are some other more important aspects?"

Respondent: "It would not be possible to overcome crises, if we would not have tendency to export. Innovations of course are part of it, but main incomes come from export."

Me: "Who initiates innovations, some suppliers or customers? What kind of suppliers does the company have?"

Respondent: "We have foreign suppliers and also local suppliers. Mainly changes come from foreign clients, from our customers."

Me: "If the company would sell to Latvian market, could it survive?"

Respondent: "No, it is not enough, but all goes just on best and now we sell nearly to all Europe. All goes just up."

Me: "That is nice to hear, thank You for interview and all success in the future!"

Respondent: "Thank you, goodbye!"

Me: "Goodbye!"

Interview with founder and owner of the company, which produces honey mix with berries.

Me: "Hello, my name is Elizabete Dombrovskā and I am studying innovation and entrepreneurship and making research for master thesis about how economic crises effected innovation and business activities in Latvia? Do you have time to speak with me?"

Respondent: "Yes, I have time to speak."

Me: "Can you tell me more about your company, what are main products and where do you sell to?"

Respondent: "main products are honey with berries without any additives; it is ecological product with different tastes. Honey is collected from local fields where I replace beehives, and as I don't have any law restrictions because bees are free to fly and collect honey without restrictions in nature, I just need to make contracts with farmers do they agree if I replace beehives on their earth. I use regional earth around city and sometimes more further?"

ME: "Should you pay them some fee for agreements?"

Respondent: "They are happy to receive some honey jar from me when I am coming, they don't ask money, I give them honey."

Me: "How has the financial crisis affected your company? Can you give examples?"

Respondent: "It has been positive changes in last years. Actually, personally my enterprise has just expanded and benefited from economic crises. I am selling much more products to shops and potential clients than I did before economic crises. Before it was very hard to sell honey in such amounts like it is now. I know that other fields have suffered, but honey production has just benefited from crises."

Me: "OOO!!! That is answer that I was not expected to hear!!!..., because my general assumption before I called to you is that economic crisis has affected negatively all entrepreneurial activities in general, as well innovation."

Respondent: " yes, sorry, now I probably don't support this perception, but it is true, I am doing well in last 4 years. All businesses that have been started after beginning of economic crises in fact are doing better and good, there are many sectors in food industry that are doing better than before. Of course you will hear some happy stories and some bad total bankruptcy stories from some enterprises, but I know that some small and medium newly enterprises are doing good. I suppose large enterprises harder can adjust to changes and more often face bankruptcy in comparison with small and medium enterprises."

Me: " Could you name these field for example? How do you explain such tendency that honey is much more demanded than before crises, why your product is sold better now in economic crises conditions than before in so called *good or fat years*?"

Respondent: "Other products which are sold much better are some kind of chocolates, marmalades and other products that are qualitative and can replace for example slugger. Pork meet and milk industry is doing bad, I doubt whether it will survive in the level as it was having before economic crises. People more are evaluating products they buy, the value that contains product is more important than price, even though price is higher for honey than before crises, they still prefer to buy because it is healthy, valuable and does not consists of additives. They appreciate more quality of food what they get for their money. Before economic crises it was very hard or even sometimes impossible to sell honey, but now my turnover has grown 300 times."

ME: "Did you invent business idea and recipes by yourself, where come this new way of mixing honey with wooden and other garden berries? It is in a way innovative approach as I see by business concept as such"

Respondent: " No, business idea and recipes I had already in my mind before economic crises, I just could not realize it in that time."

Me: "Can you cooperate with some other industries, where you sell Your products?"

Respondent: "Some ideas and business information I get from local technology incubator, I can cooperate in the field of pesticides, but otherwise in my field is less contacts with other fields, I realize and sell my products in Rimi large market chain and some local shops."

Me: "Do you create some new products also now, how do you can keep clients? Does there are some novelties that helps to hold market place and keep incomes?"

Respondent: "Yes, all the time we thing about new receipts of honey mix and more we produce what has been sold out. For example, Rimi shop chain is telling me, which product is going good and in common dialogs I get information what kind or products are needed to produce. We also try to invent new offers and then shops let me to know how they are selling."

Me: Do you use some technologies or mainly all is hand work, because it sounds like a large amount of products that you produce and sell. Do you get some support from institution or state?"

Respondent: "I have not received any support, I also done have any equipment or technologies to produce, all is hand work, and all is produced with hands. I make agreements, replace my beehives, and after from collected honey have been made mix with berries. Mainly all my expenses are on transport, it take a long distances often to drive and collect honey. I have other two workers too and family that helps me in business."

Me: "How would you characterize situation, is it easy to find employees with needed skills or experience. Could you say, that in your business human resources also plays important role or not?"

Respondent: "I would say that - it is hard to find people with experience in honey production process, but I would be even just glad to find good, assiduous people, that work diligently not just to let the time go and receive salary. I have young workers that are not having understanding and willingness to do good enough work; they just want time to pass. I would suggest that there are needed some courser for employers how to find right persons, because otherwise I am hiring persons, they work test time first three month and then I have to fire them, because they don't have diligence.

Me: "How it was before economic crises?"

Before economic it was persons with experience and motivations, but every person wanted to earn 1000 euros, even it would be just driving tractor with previous higher education, now for minimal salary 300 euros is harder to find such persons, the one are willing to

work are young people, but they miss motivation... They let the time pass buy instead to perform good work."

Me:" How would you characterize economic situation now and can You predict environmental changes."

Respondent:" All business opportunities from country regions are taken away with governmental regulations, for example, all fields will be united in large acres of hectares and all old houses in uninhabited remote areas will be demolished, but for us, country side people it will mean that life is stopped, all people are forced to move to large cities, as well all business activities are narrowed down. Government does not think what people in country side need, for example, before it was allowed to cut tries and work them out in burning materials in local saw mills, now they face hard restrictions due to license requirements, which are lobbied just for one large state enterprise, but that are stopping all other small wood works and saw mills. Before state forests were cut out, clean, now they are in mess, because it is not allowed to take not even a small twig of trees. Before crises it was more such wood saw mills, something happened, not all stopped. What future I can expect, pension, it is not pension, I will get some small *poverty survival benefit*, I would say. The only future is children, but people don't plan families, because it is expensive. Our future can be only children. One child is not enough, at list two or three children would be my support and pension replacement. Then from three children can expect at list some help when years of pension will come."

Me:" Thank You for interview, if I will have some more questions, can I call back?"

Respondent: "Yes, please, no problem, you can call me. Thank you."

Interview with laboratory leader Mara Sile, who worked in one of the leading road building companies

Me: "Hello, my name is Elizabete Dombrovskā and I am making research how the economic crises effects innovation and entrepreneurship in Latvian companies. I am writing master thesis in Oslo University and this interview is for research part. Am I speaking with Mara Sile? Do you have time to answer some of my questions?"

Respondent: "Well, I am not working in company anymore since last year, but I worked many years as laboratory manager. I am not allowed to tell any secret information; I am not sure whether I can be much useful for you from such point".

(I got little bit surprised, because her name is still in internet company page online where I found her phone number, but I continued. Woman's voice sounded little bit sad and tired.)

Me: " Anyway...mmm... No, no, but please anyway, I would like to hear Your opinion, because You still could answer at list to some questions generally, to draw the main lines in building industry as you had worked in this company before. I am not looking for any particularly confidential or detailed information; I would like to have your opinion in large lines regarding innovation aspects. Due to Your experience you could describe situation how it is in road building industry. Please just answer on my questions just in such depth and amount as company's confidentiality rules lets you."

Respondent: "Well, ok, just as much I can tell you, so far I can...What would you like to know?"

Me: "Your company is mentioned in media as one of most active and growing company in road building industry that successfully overcome crises. Was it due to some innovation activities or research that was done in laboratory?"

Respondent: "No, no, here in research or in innovation can't expand. There is not much research and innovation done! Real research and wise decisions are done in Germany."

Me: "But, how, I suppose that some materials you were testing and probably improving little bit, I mean, in material composition, which was used for roads construction, no?"

Respondent: "Yes we did, but just in regular testing to meet minimum certification requirements, general tests. In road construction and building process there was not much innovative activities. Very minor improvements or innovations are possible to make, nearly nothing, because if builder wants to build more qualitative roads from new road materials it costs much and then it is not worth to perform works, also is hard to take any tenders. All what is qualitative costs more and that builders can't afford. All decisions are made without research, without quality, because then we simply will not be able to earn nothing!"

Me: "But how then company still could be better and keep market place, how does company succeeded still to survive in crises, at the expense of what? Company still had to outperform other companies that also apply to state road tenders."

Respondent: "Basically financial crises affected company a lot. The financial lack of funding made payroll to be cut. As everywhere - many were dismissed, stayed only the most diligent and hardworking workers. Number of employed workers is minimal now, remained only most diligent that worked well, and now also we get a great help from Germany to co-operate and find work abroad."

Me: "yes, I understand, that happened in many industries...."

Respondent: "There are works and tenders which we were taking, because minimal quality requirements we fulfilled, we made only general measurements in work process."

Me: "You are saying minimal requirements, because by company will it would be higher quality performed, but it is just not possible to afford?"

Respondent: "Yes, we could afford just to fulfill minimal required quality standard, higher just costs more, and then we can't take the tender."

Respondent: "A lot of research and planning is done in Germany. Since last year it belongs also to Germans, they took over control and management in company."

Me: "How do you mean? Enterprise control pack belongs to German owners? Do they have more than 50 % of shares???"

Respondent: "no...not fifty."

Me (I guess): "little bit less than 50?"

Respondent: "yes, less than 50%."

Me: "Does there are some support from Latvian state government in last years that industry could recover?"

Respondent: "No, there is no support. The top has no understanding about bottom and that builder can't do anything! Here government has some kind of short term thinking, government does not support builders, it just does not understand builders."

Me: "Do you mean these cases, when state plans to build certain kilometers of roads, but without thinking of quality, as it happens???"

Respondent: "Yes, government plan just to build length but how it is done and with what kind of materials they don't think. There sits only persons without any understanding about road building process. In Germany is different, all is researched, planed before taken any decision. What can builder, even we want to make better, we can't afford it,

because then simply we can't earn anything, if we will build from harder materials or components."

Me: "Still, did not Your company performed any research or tests?"

Respondent: "We performed very little quality tests. All research was done in Germany. There are smart decisions; there happens research in laboratory and planning, what here... We basically did daily measurements for components that needed to be added and mixed together to create final road cover material."

Me: "How much financial resources company were giving for laboratory research tests?"

Respondent: "If you mean for some additional quality related tests, there were very little money given..."

Me: "Statistical informations says that usually 1 until 2 % of incomes"

Respondent: "well, yes, somewhere like that, very little amount."

Me: "Does in Germany they have better technologies to perform more detailed tests, or they have more skilled personnel then you had in your laboratory?"

Respondent: "yes they have good technologies, but we have the same technologies which they have in laboratory, just there before taking any decision, has been ordered and performed research, to us we made just regular research, we could make the same tests, but it was not needed to be performed in daily bases."

Me: "so, you can't say that research was not done due to lack of equipment or knowledge in your laboratory?"

Respondent: "No, we had and still have one of the best laboratories in whole country, this is certificated high level laboratory which all needed equipment, which was owned by building company and also people are with good knowledge."

Me: "Could you tell me more about tests and measurement for additive materials to create road cove ridge?"

Respondent: "All needed ingredients that company ordered to create degree of hardness, was ordered mainly from Norway, Denmark or Germany."

Me: "Why it was not used local resources from our Latvian earth?*

Respondent: "With these sand and stone pits or quarries is not enough, we don't have that degree of strengthens stones and also all pits which were officially opened on documentary basis in good years, now are closed. They don't provide the needed degree of hardness degree; anyway we need to buy in additive components from abroad, and then need to think what kind of materials we can afford to buy."

Me: "What characteristics of hardness there are?"

Respondent: "There is low, medium, and highest degree of hardness, in these countries all materials are used, they don't through nothing out! But besides are other characteristics of rocks which are important for road building, like crumble ability, compressibility and others".

Me: "enterprise had to think over what to buy in and bought lowest quality..."

Respondent: "No, not possible to use the lowest, then it will not hold the pressure force, need to choose some kind from middle hardness, highest not! In Norway and Germany they have good quality roads from hardest materials; we can't afford to make so hard level roads."

Me: "How does the enterprise keeps leading role and is holding on needed level of incomes?"

Respondent: "Many works abroad, company has projects in Europe. Germany helps to find cooperation partners."

Me: "I see, what would happen, if Germany would not have ownership?"

Respondent: "Then most probably company would slowly rustle like other builders or" *sink with the bubble*!"

M: "I asked main questions, thanks for the interview."

Respondent: "But do you have something clear from my answers or anything is clear? I told all together in big lines."

Me: "For me is clear that without financial help is not possible to survive, and our state does not promotes much innovation in road industry...Do You think something can change in future?"

Respondent: "I think nothing will change, because government does not understand what happens in building process, they don't change. Probably something will change when young people will come in with new business ideas. "

Me: "But company in despite is continuing, and is relatively competitive like others. What could you tell about structure of the company, does it promotes some innovations"

Respondent: "Company is organizes good and also people are working with their best attitude, but top is stagnated, government I mean, company was performing good and communication in between was good. We were the best and we still are one of the best building companies in Latvia."

Me: "Thank you very much for interview."

Respondent: "Goodbye."

Me: "Goodbye."